The Impact of the Critical Time Intervention for People with Severe Mental Illness in the Transition from Prison to the Community

Hopkin, Gareth Daniel

Awarding institution:
King's College London

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Gareth Hopkin

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Health Service and Population Research Department

Institute of Psychiatry, Psychology and Neuroscience

King's College London

Abstract

Background: There are high rates of mental health problems among prisoners and the prevalence of severe mental illness is far higher than in the community. Although mental health services have become well established within prisons in England and Wales, the transition from prison to the community presents difficulties for the provision of care and there are negative outcomes during this period.

Methods: Participants were recruited from eight prisons in London and the North West of England and randomised to receive either the Critical Time Intervention or treatment as usual. They were followed up at six weeks, six months and 12 months and a number of variables were measured at each time point. A sub sample of these participants and members of prison and community staff also completed qualitative interviews.

Results: One hundred and fifty participants were recruited and follow up data were collected for 116 participants at six week follow up and 98 and 85 participants at six months and at 12 months. Participants in the CTI group had significantly higher levels of contact with; (I) any mental health professional, (II) allocation of a care co-ordinator and; (III) contact with a care co-ordinator compared to the TAU group. These differences were not significant at six month or at 12 month follow up. Legal status and problem drug use were associated with better outcomes at six weeks after release from prison and GP involvement in care on entry was associated with worse outcomes. Themes relating to needs and problems after release, the perceived benefits and problems of the Critical Time Intervention, and provision of care in this period were identified in qualitative interviews.

Conclusions: The Critical Time Intervention is effective in improving outcomes in the early transition from prison to the community and should be considered by decision makers at the national or regional level. Further research should determine whether the CTI is effective as a service and whether it has a beneficial effect on other important outcomes.

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Terminology

Continuity:

Continuity is seen as central to the care of patients with chronic conditions, although it is often not well defined. For the purpose of this thesis, the term continuity most closely matches to the process of orderly and uninterrupted care and this is relevant in the transition from prison to community mental health services.

Engagement:

Engagement is also seen as key to providing care to patients with mental health problems and prisoners with mental health problems are often described as 'hard to engage'. For the purpose of this thesis, engagement is seen as contact with mental health services that is characterised by openness, help seeking and collaboration. This thesis uses contact with mental health services as an outcome and whilst service contact does not fully capture the complexity of engagement, it is related and is a valid outcome where measuring engagement would be unfeasible.

Prisoners and Released Prisoners:

The term prisoner will be used to describe a person who is being held in prison custody.

The term released prisoner will be used to describe a person who has been held in prison custody and has been released to the community. The term can have negative connotations but the term is used for clarity and the intention is not to define a person as a former or ex-prisoner indefinitely. In both cases, people may also be patients or service users in prison or the community.

Severe Mental Illness:

The term severe mental illness will be used to describe those diagnosed with schizophrenia, schizoaffective disorder or other psychotic illness, and bipolar affective disorder or other severe affective disorders. Other mental health conditions are also discussed in this thesis and "with severe mental illness" or "with mental health problems" will be used to indicate this as appropriate.

Abbreviations

95% CI: 95% Confidence Interval
ACCT: Assessment, Care in Custody and Teamwork
CCG: Clinical Commissioning Group
CJS: Criminal Justice System
CMHT: Community Mental Health Team
CORP: Connecticut Offender Re-entry Program
CPA: Care Programme Approach
CTI: Critical Time Intervention
CTO: Community Treatment Order
DAST: Drug Abuse Screening Tool
EPPHPP: Effective Public Health Practice Project
FIT: Family Integrated Transition
GP: General Practitioner
HM: Her Majesty's
HMP: Her Majesty's Prison
HMPS: Her Majesty's Prison Service
MAPPA: Multi Agency Public Protection Agency
MAST: Michigan Alcohol Screening Tool
MIOCTP: Mentally Ill Offender Community Transition Program
NIHR: National Institute of Health Research
NHS: National Health Service
OPCRIT: Operational Criteria Checklist for Psychotic and Affective Disorders
OR: Odds Ratio
p-NOMIS: Prisoner National Offender Management Information System
SCID-II: Structured Clinical Interview for DSM-IV Axis II Disorders
SMI: Severe Mental Illness
TAU: Treatment As Usual
UCLA: University of California, Los Angeles
USA: United States of America

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Firstly, I would like to thank my supervisors, Graham Thornicroft and Sara Evans-Lacko, for all their time and effort and providing endless guidance which has allowed me to submit this PhD but will also be invaluable for whatever I do in the future. I would like to thank Manuela Jarrett for supporting me throughout recruitment, Andrew Forrester and Sue Bell for smoothing the way in prison and helping me get on, and everyone else at work who provided much needed advice at the right time. I would also like to thank Jenny Shaw for allowing me to complete this PhD with data from her project.

I would like to thank the people who took part in the study and were willing to allow me an insight into their lives. Working in prison has been challenging, but at various times I found the participants insightful, intelligent, and enjoyable to work with and learning about their stories has given me a better understanding of the world. I continue to believe that the conditions that prisoners are held in and staff work in are appalling and the system as it stands deprives people of an improved future which is beneficial to us all. I hope in years to come we look back on this with regret.

Finally, and most importantly I'd like to thank my family for all the support they have given me over the years. Thanks to my Mum and Dad for encouraging me to aim high and always being there to give me support and advice when I've needed it, even if I haven't always listened. Thanks to Geth and Rhys for receiving many bored messages and always providing thoughtful answers. And thanks to Becca for being so understanding and having endless patience, I couldn't have done this without her.

The degree of civilization in a society can be judged by entering its prisons

- Fyodor Dostoyevsky, 1862

The moral test of Government is how it treats …. those in the shadows of life, the sick, the needy and the handicapped.

- Hubert Humphrey, 1977

No one truly knows a nation until one has been inside its jails. A nation should not be judged by how it treats its highest citizens but its lowest ones.

- Nelson Mandela, 1995

Chapter 1. Introduction

1.1. Aims, Objectives and Hypotheses

Quantitative Study

Aim 1. To investigate whether operational outcomes and processes can be improved with a novel intervention for prisoners with severe mental illness during their transition from prison to the community.

Objective 1.1. To compare contact with mental health services and service provision for released prisoners who receive the Critical Time Intervention (CTI) compared to those who do not at six week follow up.

Hypothesis 1.1.1. Released prisoners who receive the CTI will have significantly higher levels of contact with any mental health professional compared to prisoners in the treatment as usual (TAU) group at six weeks after release.

Hypothesis 1.1.2. Released prisoners who receive the CTI will have significantly higher levels of allocation of a care co-ordinator compared to prisoners in the TAU group at six weeks after release.

Hypothesis 1.1.3. Released prisoners who receive the CTI will have significantly higher levels of contact with a care co-ordinator compared to prisoners in the TAU group at six weeks after release.

Aim 2. To identify predictors of contact with mental health services and service provision during the transition from prison to the community at six weeks after release.

Objective 2.1. To examine whether socio-demographic, forensic and clinical variables predict contact with mental health services and service provision at six weeks post-release for both CTI and TAU participants.

Hypothesis 2.1.1. Socio-demographic variables, for example age, ethnicity and living arrangements, will be associated with contact with mental health services and service provision at six weeks after release.

Hypothesis 2.1.2. Forensic variables, such as legal status and number of previous times in prison, will be associated with contact with mental health services and service provision at six weeks after release.

Hypothesis 2.1.3. Clinical variables, such as diagnosis, comorbidity and acceptance of the need for help, will be associated with contact with mental health services and service provision at six weeks after release.

Objective 2.2. To examine whether past service use predicts contact with mental health services and service provision at six weeks post-release.

Hypothesis 2.2.1. Contact with mental health or other services before entering prison will be significantly associated with higher levels of contact with mental health services and improved service provision at six weeks after release.

Aim 3. To determine whether the CTI can improve contact with mental health services and service provision over a longer time period.

Objective 3.1. To compare contact with mental health services and service provision in the CTI and TAU groups at six and 12 months follow up.

Hypothesis 3.1.1. Released prisoners who receive CTI will have significantly higher levels of contact with any mental health professional compared to prisoners in the TAU group at six and 12 months after release.

Hypothesis 3.1.2. Released prisoners who receive CTI will have significantly higher levels of allocation of a care co-ordinator compared to prisoners in the TAU group at six and 12 months after release.

Hypothesis 3.1.3. Released prisoners who receive CTI will have significantly higher levels of contact with an allocated care co-ordinator compared to prisoners in the TAU group at six and 12 months after release.

Aim 4. To investigate whether the CTI has a beneficial effect on other operational outcomes and processes at six weeks, and six and 12 months after release.

Objective 4.1. To examine whether other operational outcomes and processes are improved by the CTI compared to treatment as usual at six weeks, and six and 12 months after release.

Hypothesis 4.1.1. Other operational outcomes and processes, such as having a care plan in place and being registered with a GP, will be improved for released prisoners who receive the CTI compared to those who received TAU.

Objective 4.2. To examine whether forensic outcomes are reduced by the Critical Time Intervention compared to treatment as usual six weeks, and six and 12 months after release.

Hypothesis 4.2.1. Return to prison will be reduced for released prisoners who receive the CTI compared to those who received TAU at each time point.

Qualitative Study

Aim 1. To investigate prisoners' beliefs and expectations about release from prison and their return to the community.

Objective 1.1. To identify beliefs, expectations and perceived needs of soon to be released prisoners about the discharge process and engagement with services in the community.

Objective 1.2. To examine the experiences of recently released prisoners with relation to their discharge from prison, the care they received through this process and how this related to their engagement with services.

Objective 1.3. To compare the differences in experience of those who received the CTI or TAU.

Aim 2. To investigate prison and community staff's thoughts and perceptions about the transitional period and the CTI.

Objective 2.1. To examine prison staff's views of the needs of discharged prisoners and experiences of the barriers and facilitators to arranging care for after release.

Objective 2.2. To examine community staff's views of the needs of discharged prisoners and experiences of the barriers and facilitators to arranging care for after release.

Aim 3. To investigate the experience of release and provision of service and to identify common themes discussed by both prisoners and prison and community staff.

Objective 3.1. To identify overarching themes relating to release from prison and the transition to the community from each of the three groups.

1.2. Thesis Structure

Chapters 2 to 6 of this thesis present a broad range of issues that are relevant to the thesis. Their relevance and relationship to other aspects of this thesis is discussed and the scope of the thesis is outlined. Chapter 7 presents the methods of the qualitative and quantitative components and the mixed methods approach. Chapter 8 describes the results and Chapter 9 contains the discussion and conclusion.

Chapter 2 introduces the prevalence of mental health problems in the prison population and discusses how mental health services have developed to both identify and manage prisoners with a severe mental illness. The history of mental health services provided by the prison service is described and the move to National Health Service (NHS) commissioning is discussed. Current models of prison mental health care are outlined in more detail and challenges in providing these services in prison are examined.

In Chapter 3, pathways through the prison system and mental health services are presented and problems related to the period of release and the transition from prison to the community are discussed. A number of outcomes are addressed and possible reasons for negative outcomes are discussed.

In Chapter 4, the Critical Time Intervention is presented with a consideration of previous evaluations of the CTI in different settings. A systematic review of interventions that bridge the transition from prison to the community is presented. The findings of studies included in the systematic review are presented and the quality of existing literature is discussed. Transitions in other settings are briefly considered and their relevance to the present thesis discussed. A justification for using the Critical Time Intervention is included in this Chapter.

Chapter 5 of the thesis discusses more conceptual issues and considers the definition and measurement of engagement and continuity. Both of these terms are related to this thesis and a consideration of how these concepts relate to the outcome measures used in this thesis is needed.

Chapter 6 provides a synthesis of the preceding Chapters and sets out of the scope of the thesis. Issues related to what the thesis does and does not set out to answer are presented and a rationale for methodological decisions is given.

Chapter 7 presents an overview of the methods used in the thesis and then provides specific details on the methods of the quantitative and qualitative components of the thesis. In addition, there is a note on the qualitative and quantitative approach and how these components are combined in a mixed methods way.

In Chapter 8, recruitment to the trial is presented and is followed by the results of the quantitative and qualitative components. The primary outcomes of contact with mental health services and service provision at six weeks are presented first with predictors of outcome at this time point. This is followed by the primary outcomes at six and 12 month follow up and secondary outcomes, including other health and forensic outcomes. The themes identified in prisoner interviews are presented followed by themes from staff interviews and then overarching themes. Areas of the quantitative and qualitative components that are related and can be interpreted with the mixed methods approach are then presented.

Chapter 9 is the discussion of the thesis. A summary of the findings is presented and this is followed by an interpretation of the meaning of the findings and their relation to existing literature. Methodological considerations are presented with the strength and limitations of the thesis. Directions for future research are suggested and the implications of the findings of this thesis are presented using an ecological framework. The thesis ends with concluding remarks about the importance of the thesis and the key messages.

1.3. Statement of Work

The data for this PhD was collected as part of the larger National Institute of Health Research (NIHR) funded CrISP trial. Due to this, a statement of my input to the data and analyses presented in this thesis is required to highlight my contribution. I recruited 117 out of the 150 participants included in the quantitative component of the trial and collected the corresponding follow up data for each of these participants. In addition, I conducted 20 out of 25 of the qualitative interviews with prisoners and staff. The quantitative analysis presented in this thesis is distinct from the analysis of the larger trial and was conceived and conducted by myself with input from my supervisors (GT and SEL). The qualitative analysis is also separate from the main trial and was planned and conducted by myself with input from my supervisors (GT and SEL). The systematic review was not part of the larger NIHR trial and was unique to this thesis. Therefore, I completed the majority of data collection for the thesis and all of the analyses and it presents original work which is distinct from the larger NIHR trial.

Chapter 2. Prison, Mental Health and Provision of Services

2.1. Prison and Mental Health

Prisons exist to detain some of the most complex and challenging individuals in society and it has long been accepted that these individuals are susceptible to mental health problems. Historic accounts of prison conditions refer to 'idiots and lunatics' (Howard, 1780, p.16) who would now be recognised as having mental health problems or neurodevelopmental disorders and even in the 1700s it was recognised that appropriate care and treatment would allow these individuals to recover.

Academic interest in the mental health of prisoners increased in the 1980s and 90s when a number of single site studies that investigated the prevalence of mental disorder in a range of prison settings began to be published. Early studies confirmed that rates of mental disorder were high in male and female prisoners (Coid, 1988; Hurley & Dunne, 1991), in remand and sentenced samples (Birmingham, Mason, & Grubin, 1996; Hardie, Bhui, Brown, Watson, & Parrott, 1998) and these findings were replicated in a range of countries including the United Kingdom, (Coid, 1988), rural and urban United States of America (USA; Powell, Holt, & Fondacaro, 1997; Teplin, 1990), Canada (Bland, Newman, Dyck, & Orn, 1990), and Switzerland (Harding & Zimmermann, 1989). These type of single site studies continue to be published alongside more sophisticated evidence and they continue to confirm the high prevalence of mental disorder in prison across the globe and in numerous settings (Andreoli et al., 2014; Maccio et al., 2015; Osasona & Koleoso, 2015).

These early single site studies highlighted that mental health problems were common in prison samples and, where prevalence of mental disorder in prison was compared with matched local samples, it was found that all mental disorders were elevated compared to the general population. Some mental disorders were over twice as common in the prison population (Bland et al., 1990). However, these early studies relied on small samples of individual sites and had varying methodological approaches and quality which limited their generalisability. Despite their usefulness in raising awareness of the issue, higher quality research with more comprehensive samples was needed.

Two studies of a cross section of prisons in England and Wales assessed the prevalence of disorder in unconvicted and sentenced prisoners. Gunn et al. (1991) recruited a sample of male sentenced prisoners that represented 5% of the prison population and using a semi

structured interview designed for the study aimed to estimate rates of mental disorder. The study found that 37% of sentenced prisoners had a psychiatric disorder. Whilst the authors conclude that levels of psychosis were comparable to community samples, the 2% rate that was found is higher than subsequent estimates of community prevalence (Jenkins et al., 1997). Brooke et al. (1996) used a similar methodology to assess disorder in a sample of unconvicted prisoners and found higher levels than in a sentenced sample. 63% of participants had one diagnosable mental disorder and a third had additional comorbidity. It was also found that 4.8% of unsentenced participants had psychosis compared to 2% in the sentenced group. In both studies it was found that prisoners with disorders were often unidentified by prison services and in a number of cases immediate transfer to psychiatric hospital was recommended for appropriate management (Brooke et al., 1996; Gunn et al., 1991).

Single site studies and those including multiple prisons highlighted that prisoners do have significant levels of mental disorder and this recognition led to the commissioning of a large scale national survey by the Office of National Statistics (Singleton, Meltzer, Gatward, Coid, & Deasy, 1997). Using the same methodology as previous work of private households (Jenkins et al., 1997), the survey aimed to estimate prevalence of disorder using diagnostic criteria. All prisons in England and Wales were sampled and in total 3142 male and female prisoners were interviewed. Prisoners in all settings were found to have high levels of disorder and comorbidity and only 10% of prisoners were found to have no mental disorder when drug and alcohol abuse was included (Singleton et al., 1997). Personality disorder and substance misuse were the most commonly identified disorder but higher rates of psychosis, compared to earlier studies (Brooke et al., 1996; Gunn et al., 1991), were also found. 10% of male remand and 7% of male sentenced prisoners were found to have a current or recent functional psychosis compared to only 0.4% in general households according to the same assessments (Jenkins et al., 1997). Those assessed as having a probable functional psychosis were also likely to have three or four further disorders and represent a particularly complex group of patients with diverse psychiatric symptoms and needs (Singleton et al., 1997).

Studies examining single or multiple sites and examining all prisons in a prison system confirm that levels of mental disorder are high and two systematic reviews have collated data from a wider range of Western (Fazel & Danesh, 2002) and international (Fazel & Seewald, 2012) studies than reported above. In a review of 23,000 prisoners from 62 surveys (Fazel & Danesh, 2002), rates of psychosis were found to be 4% and psychosis or major depression were found in 1 in 7 cases. An updated study included more recent studies and low and middle income

countries (Fazel & Seewald, 2012) and again found that in high income countries rates of psychosis were around 3.5%.

Studies on prevalence in prison have differing approaches and methodological quality and high levels of heterogeneity are cited in both systematic reviews of the topic (Fazel & Danesh, 2002; Fazel & Seewald, 2012). However, studies have consistently shown that the prevalence of disorder is higher in prison than in the general population. Prisoners come from deprived backgrounds with high levels of adversity in childhood and adolescence (Brewer-Smyth, Cornelius, & Pickelsimer, 2015; Social Exclusion Unit, 2002). In adulthood they have chaotic lifestyles that are characterised by risk taking behaviour (Fazel, Bains, & Doll, 2006; Lahn, 2005; Yechiam et al., 2008) and homelessness (Social Exclusion Unit, 2002) which increase their chances of both committing crime and having problems with their mental health. In addition, individuals with a mental disorder are particularly vulnerable to offending and imprisonment (Fazel et al., 2015; Witt, van Dorn, & Fazel, 2013) and the nature of offending may in itself confer risks to mental health (Gray et al., 2003).

There are also reasons to believe that the experience of being in prison is detrimental and may cause, or at least exacerbate, mental health problems (Birmingham, 2003; Durcan, 2008). Many prison buildings in England and Wales are from the Victorian era and the prison service has acknowledged that many are no longer fit for purpose (Prison Service, 2000). Unprecedented numbers of individuals being detained mean that prisons are overcrowded and sharing of cells designed for one person is commonplace (Ministry of Justice, 2013). Prisoners commonly cite problems related to separation from family, stress, fear, and boredom alongside the uncertainty related to being on remand or adjustment to a long custodial sentence (Nurse, Woodcock, & Ormsby, 2003). All of these problems are likely to have an impact on prisoners' wellbeing and their mental health. These environmental factors combined with prisoners' backgrounds are likely to at least partly explain why levels of mental disorder are high in this population. Information on prisoners' background and the prison environment provides an important context to the lives of individuals in this population when working with this group.

Rates of imprisonment and the size of prison populations are increasing across the world and in England and Wales the current adult male prison population stands at over 85,000 (Ministry of Justice, 2015). As recently as the 1990s, the prison population was less than half of this at 41,000 and demonstrates how rapidly the population has expanded (Berman & Dar, 2013). Extrapolating the prevalence reported in systematic reviews (Fazel & Danesh, 2002; Fazel &

Seewald, 2012) to the current prison population in England and Wales would suggest that at any time around 2800 prisoners will have psychosis and a further 8000 will have another serious mental illness. Studies of prevalence in Ireland a decade ago suggested that 200 additional beds in psychiatric units were needed for those with severe mental illness held inappropriately in prison (Duffy, Linehan, & Kennedy, 2006; Kennedy, 2006; Linehan et al., 2005) and with the numbers held in the prison system in England and Wales this number is likely to be much greater. It is clear that mental health in prison is a significant issue and resources are needed to ensure that these prisoners receive appropriate care.

2.2. History of Health Service Provision

Due to their detention, prisoners cannot access health services at their will and rely on the prison service to provide adequate healthcare. Prisons have had some health care provision since the intervention of prison reformists in the 18th century and in 1877 general conditions and healthcare improved in line with the Prison Act and centralisation of prison administration (Reed, 2003). Due to the existence of an already established national service, prison health was not included in the National Health Service's (NHS) original remit but over time the separation of prison and community health services was increasingly questioned and the failings of this dual system became clear (Smith, 1999).

In 1996, Sir David Ramsbotham the then Chief Inspector of Prisons outlined why prison health services should no longer be separate from the NHS and highlighted the benefits of an integrated system (Her Majesty's Chief Inspector of Prisons, 1996). His report notes that whilst improvements in prison health care provision had been made in recent years, the scale of health needs in prison meant that standards were falling further behind community health services provided by the NHS. Problems related to the variability of healthcare professionals' qualifications, isolation of staff from professional bodies, and the separation of the role of prison officer and healthcare provider were also highlighted and supported by other investigations from the same period (Reed & Lyne, 1997).

An issue of particular importance in this thesis is the matter of continuity of care between prison and the community and the Chief Inspector references this issue (Her Majesty's Chief Inspector of Prisons, 1996). Ramsbotham noted that prisoners are in the community prior to imprisonment and that the majority will be released. Their care both prior to and after their stay in prison is provided by the NHS and it did not make sense for a different service to provide their healthcare in an often brief time in prison. He concluded that "only by the NHS

accepting responsibility for health care in prisons can two essentials – equality and continuity of care – be ensured" (Her Majesty's Chief Inspector of Prisons, 1996, p8).

In response to the Chief Inspector's report and the longstanding consensus among health bodies (Home Office, 1964; Royal College of Psychiatry, 1979), the Government acknowledged that improvements could not be made in isolation and a joint HMPS and the NHS Executive working group was set up to recommend necessary changes (Joint HMPS and NHS Executive Working Group, 1999). Its guiding principle was that prisoners should receive an equivalent level of care to the general public and in 2000 it resulted in the creation of a task force based in the Department of Health and the delivery of services by a partnership of prison and health services (HMPS and Department of Health, 2001). In 2003, the transfer of responsibility from the Home Office, now the Ministry of Justice, to the Department of Health was completed and the NHS became responsible for the commissioning and management of prison health services (Birmingham, 2003).

The NHS has continued to be responsible for prison healthcare and in the years since 2003 additional responsibilities have been transferred to the NHS from other bodies, including escort and bed-watch services and non-clinical substance abuse services (National Offender Management Service, Public Health England, & NHS England, 2015). Even with the increased involvement of the NHS, there needs to be cooperation between prison and health agencies for healthcare to be delivered and national partnerships are in place to ensure this is the case (National Offender Management Service, Public Health England, & NHS England, 2015).

Being detained in prison and having your liberty restricted can be a damaging experience (Birmingham, 2003). However, many individuals have complex lives that are characterised by behaviour that leads to risk and potential harm in the community. Over half of prisoners are not registered with a general practitioner (Social Exclusion Unit, 2002), despite having both high rates of physical and mental health problems, and prison can be an opportunity for health services to both identify and treat unmet health needs in a structured way (Reed, 2003). Mental health initiatives will be discussed in more detail later (Section 2.3.), however, the identification and initiation of treatment for sexually transmitted diseases is a strong example of how interventions can be effective in this period (Beckwith et al., 2012; Beckwith et al., 2014). This highlights the importance of prison healthcare services being provided in a way which maximises their potential to improve the situation of prisoners both in prison but also after they leave. Improvements have certainly been made since the NHS has assumed

responsibility for prison care, however, continuing innovation and improvement of care is needed.

2.3. Development of Prison Mental Health Services

Changes to health service provision in prison and its transfer from the prison service to the NHS has been described (Section 2.2.), but a specific focus on the development of mental health care services in prison is also needed. This is important in providing context to the support that prisoners with severe mental illness receive in prison and the environment that they are released from. Of particular important to this thesis will be the introduction and development of prison mental health inreach teams which provide care for prisoners with severe mental illness (SMI) and other complex needs.

Prison Mental Health Care Prior to NHS Responsibility

From 1948 the NHS was not initially obliged to consider the needs of prisoners, and prison psychiatry developed on a separate track, apart from the new community-focused ethos of other mental health services (Birmingham, 2003; Thornicroft et al., 1999). Until the 1990s, prison mental health care was provided by either prison doctors with little mental health training or by visiting psychiatrists, who could provide weekly sessions for large prisons (Smith, 1983). This service was provided on an *ad hoc* basis and, having been developed locally, standards differed across prisons and regions. The 'Patient or Prisoner' report stated that 'there is still a desperate need to provide proper psychiatric services' (Her Majesty's Chief Inspector of Prisons, 1996, p.10), and highlighted that prison doctors and nurses were not trained in psychiatry and were often required to undertake inappropriate duties, such as the assessment of psychiatric disorders and prescription and management of psychiatric medication.

The 'Future of Organisation of Prison Health Care' report (Joint HMPS and NHS Executive Working Group, 1999) brought together a joint prison and Department of Health working group and had a remit to consider all aspects of prisoner's health. It is clear from the report that the mental health care of prisoners was a particular concern. It suggested that physical health care services were well provided, but when specialist mental health input was required it was provided in an *ad hoc* way and was often unavailable. It recognised that the Care Programme Approach (CPA) was rarely adhered to, that services in prison had fallen behind those in the community and that tests of equivalence (Section 2.2.) had been failed.

The main focus of the report (Joint HMPS and NHS Executive Working Group, 1999) related to issues of funding and joint responsibility and its remit was not to provide specific ways in which problems could be dealt with, however, it also documented problems with the provision of mental health care and suggested ways to improve care. A lack of expertise in psychiatry and limited resources were highlighted as well as problems with screening and recognition of mental health problems that meant prisoners with mental health issues were not identified. The report led to changes in who was responsible for care (Section 2.2.) but it also recommended that outreach work to prison wings should be introduced and that better screening at reception was needed to ensure better identification of need.

Changing the Outlook and Recommendations for Improved Care

As a result of several such critical reports (Her Majesty's Chief Inspector of Prisons, 1996; Joint HMPS and NHS Executive Working Group, 1999), changes were made to prison health services and some initiatives, such as improved reception screening (Birmingham, Gray, Mason, & Grubin, 2000), had a beneficial impact on care. The joint report committed prison health services to the principle of equivalence, meaning that prisoners were entitled to the same level of care as those not in prison and should not be deprived services due to their imprisonment (Joint HMPS and NHS Executive Working Group, 1999). However, even with some NHS involvement and the commitments to prisoners made in the National Service Framework for Mental Health (Department of Health, 1999), prison mental health care remained a long way from reaching standards of care provided by community services and further reports were commissioned to expedite improvements.

The 'Changing the Outlook' report (Department of Health, 2001) signalled a major change in how mental health care was to be provided, and recommended the introduction of mental health inreach teams with the goal of improving wing based care. The report reinforced the idea of equivalence and stated that an individual's access to care should not be prevented or delayed by involvement with the Criminal Justice System. It acknowledged that whilst rates of mental health problems in prison are high, in the majority of cases detention under the Mental Health Act is not required and care could be managed in prison in similar ways to the community (Department of Health, 2001). Recommendations included increased mental health promotion, the effective use of primary care in managing some mental health conditions and the use of psychological therapy and day care services, but perhaps the most

important result was the introduction of the concept of mental health inreach teams and a framework for their introduction.

Following on from 'Changing the Outlook' (Department of Health, 2001), mental health inreach teams were introduced in 16 prisons and from 2001 until 2004 they were to be rolled out across the 70 prisons with greatest need (Department of Health, 2001). The purpose of these teams was to provide services in a way that would be broadly similar to the function of community mental health teams. The idea being that prison could be conceptualised as a community and that mental health inreach teams could provide care to prisoners who would remain in cells on ordinary location rather than being transferred to a dedicated hospital wing (Steel et al., 2007). Mental health inreach teams would be multidisciplinary and could provide care in clinics based in prison healthcare centres, or by visiting prisoners in their prison accommodation. Three hundred additional staff were to be funded for the scheme and it was estimated that 5000 prisoners would be placed on a Care Programme Approach (CPA) with continuity of care between prison and the community both on arrival and on release. This model of work had no conceptual difficulty as similarly to community teams, prisoners' care would be provided and managed in a consensual way (Wilson, 2004).

'Changing the Outlook' (Department of Health, 2001) recognised that mental health inreach teams were not a bolt on that could limit themselves to a restricted caseload but also that they could not be seen as a service which could solve all of the problems that had been identified with prison mental health care provision. In line with this, it was suggested that all prisoners would benefit from the introduction of these teams, but that those with severe and enduring mental illness and the highest level of need would receive the most attention.

Implementation and Effectiveness of Mental Health Inreach Teams

Mental health inreach teams, and the commitment of extra resources for dedicated mental health teams, were welcomed by prison health care professionals (Birmingham, 2003). However, even before their adoption, clinicians warned that their resources could become saturated by unwieldy administrative duties, particularly with relation to prisoners identified as needing transfer to psychiatric facilities (Maden, 2003).

The first review of mental health inreach teams aimed to establish how successfully the introduction of these teams had been and to determine how effective they were in providing care for prisoners with mental health problems (Brooker, Ricketts, Lemme, Dent-Brown, &

Hibbert, 2005). The study was limited by poor levels of response from inreach team leaders and individual staff. However, it was able to determine the extent of mental health inreach team's introduction. Sixty four prison mental health inreach teams were in operation and around 200 people were employed under the scheme. The review found high levels of variation between teams in different geographical areas and in different types of prisons and their introduction did not follow a prescribed approach. This was partly due to the size and nature of prisons with some prisons having lower levels of morbidity, but the presence or lack of local "champions" also had an effect on variations as did the need to work within the culture and organisation of individual prisons where change is not always welcomed or supported. Despite these issues, the review recognised that "hard battles have been fought ... to ensure that in-reach services have been established" (p.132, Brooker, Ricketts, Lemme, Dent-Brown, & Hibbert, 2005).

This report also found that assessing patients who were to be held on the caseload took up a large amount of mental health inreach team resources, whilst administrative duties and difficulties referring prisoners to external psychiatric unit hospital were not cited as a problem which had been expected by some (Maden, 2003). As was intended with the suggestion in 'Changing the Outlook' that all prisoners would benefit but those with SMI would benefit most, it was found that operational policies included strict acceptance criteria with regards to diagnoses of severe mental illness. However, many prisoners who did not fit the acceptance criteria were also taken onto the caseload as staff felt that their expertise could not be restricted to only the most severe cases when there were other prisoners who could benefit from input from the mental health inreach team. Despite these issues, health staff, as well as prison governors and officers, overwhelmingly supported the introduction of mental health inreach teams and the perceived user satisfaction that they report is high.

A second national review of mental health inreach teams (Brooker & Gojkovic, 2009; Offender Health Research Network, 2009) adapted their methods to allow the use of telephone interviews and a more concise questionnaire and the number of responses improved from 50% to 73%. From these interviews, they were able to assess the composition of the caseload of several inreach teams and report on the resources that had been allocated to the inreach programme and the work that teams completed. It was found that 4700 service users were then provided mental health care through mental health inreach teams. Since the earlier survey (Brooker et al., 2005), mental health inreach teams' size had increased by 20%, but this was accompanied by increases in both referrals to the team and the size of their caseloads that outweighed increases in resources. Mental health inreach teams were primarily introduced to

support prisoners with severe mental illness, however, the report concludes that only 58% of the caseload had a diagnosis of SMI alone or with a comorbid personality disorder, or a diagnosis of substance misuse. 31% of prisoners on the caseload were being managed for other mental health disorders and 11% of prisoners on the caseload had no recognised disorder.

This 'mission creep', with prisoners being accepted for reasons other than having an SMI, has diluted the service provided by mental health inreach teams and must be seen in conjunction with the fact that inreach caseloads hold only 14% of the estimated total number of prisoners with SMI in the prison estate (Brooker & Gojkovic, 2009; Offender Health Research Network, 2009). Mental health inreach teams have been successful in increasing access to mental health care services in prison and supporting prisoners with SMI. However, prisoners with SMI often remain unidentified during their stay in prison and mental health inreach teams often manage prisoners without SMI but who have other complex needs. In order to prevent mental health inreach teams from becoming the answer for all mental health concerns that was warned against in 'Changing the Outlook' (Department of Health, 2001), other mental health services in prison need strengthening to provide for prisoners who do not meet mental health inreach teams' acceptance criteria.

No research has been conducted which examines the effectiveness of the inreach teams in reducing psychiatric symptoms and distress in prison, or improving quality of life. However, one study examining the needs of prisoners on the caseload found that there were high levels of unmet need that were not addressed (Harty, Jarrett, Thornicroft, & Shaw, 2012). The introduction of mental health inreach teams was associated with a reduction in the numbers of suicides in prison (Howard League of Penal Reform, 2006). This could be due to an improving awareness of mental health issues in prison and the introduction of protocols for managing self-harm or other reasons which are not described in the literature (Steel et al., 2007). However, given that mental health inreach teams and their staff take an active role in both education of other staff and Assessment, Care in Custody and Teamwork (ACCT) protocols (Ramluggun, 2011), it may be that their introduction has been partly responsible for this reduction.

The 'Changing the Outlook' report was published in 2001 when the prison population stood at below 70,000 after a brief period of stabilisation in numbers. In the following years the number of prisoners has risen and is now approaching 85,000. None of the reports indicate that a future increase in prison numbers was accounted for and the resources that have been

allocated to prison mental health services has not kept pace with the rise in prisoners. Both the target of recruiting 300 mental health inreach team staff and managing 5000 prisoners had not yet been met by the 2007 survey (Brooker & Gojkovic, 2009; Offender Health Research Network, 2009) and with the increase in prison numbers these figures represent provision of mental health care for a far lower proportion of prisoners than would have originally been intended.

Current State of Mental Health Care Provision

Prison mental health care provision continues to need advocacy. A Sainsbury's Centre for Mental Health analysis suggests that expenditure is a third of what would be required to reach equivalence with community services (Brooker, Duggan, Fox, Mills, & Parsonage, 2008) and questions remain about where these funding responsibilities should lie, especially with respect to new prison sites (Smith, 2015). However, mental health inreach teams have become well established in the prisons that they function in and their work is valued by both prison staff and prisoners. The first national survey rightly recognises that "Implementing a new NHS service across the country in closed institutions was not ever going to be straightforward" (p.132, Brooker, Duggan, Fox, Mills, & Parsonage, 2008) and even given the issues to do with 'mission creep' and a lack of resources, their introduction has been a positive step.

Recent innovations in prison mental health provision have focused on integrated working (Till, Exworthy, & Forrester, 2014) and increasingly prison mental health services are arranging primary and secondary mental health care more closely so that duplication of referral and assessment is reduced and triage of prisoners is more streamlined and effective (Hopkin, Samele, Singh, & Forrester, in press). Issues regarding the variability, in both the function and resourcing, of mental health services and mental health inreach teams across the country (Brooker et al., 2008; Forrester et al., 2013) remain of concern and need to be addressed.

The fieldwork for the most recent national survey (Offender Health Research Network, 2009) was completed in 2008 and there is not a great deal of recent work indicating how teams have progressed since and the nature of their caseloads. Two studies at one of the thesis sites have aimed to describe the characteristics of prisoners who are accepted onto the caseload. Although single site studies have serious limitations, in this case a study describing one of the thesis sites prior to the start of data collection is beneficial. A sample of referrals was taken in 2008 (Forrester, Singh, Slade, Exworthy, & Sen, 2014) and when compared to a sample from 2011 (Hopkin et al., in press), the number of referrals to the mental health inreach team had

doubled. The most recent of these single site case studies found that at least at this site, the majority of those on the caseload had a primary diagnosis of SMI and that this group were likely to have a history of contact with community mental health services. The group accepted onto the caseload had problems related to substance misuse and other social problems related to housing and lack of employment, many were of no fixed abode or homeless prior to imprisonment. These findings are important in indicating the type of group that the mental health inreach team in one of the thesis sites works with.

The transfer of responsibility for mental health services in prison to the NHS and the introduction of prison mental health inreach teams has been a welcome development. Some level of support can now be provided for prisoners with severe mental illness across the prison estate, however, variations across mental health inreach teams exist and they have come to manage a wider range of prisoners than originally intended. Mental health inreach teams are beginning to introduce more integrated service by working more closely with primary mental health services and other related agencies and their role will continue to evolve over time. Mental health inreach teams' place in the pathway of prisoners with severe mental illness will be considered later (Section 3.2.) as will challenges of providing mental health services in prison (Section 2.4.) and issues to do with release and transition to the community (Section 3.3. and 3.4.).

2.4. Challenges in Providing Prison Healthcare

There are a number of challenges in providing healthcare in prison and indeed prisons have sometimes been described as fundamentally anti-therapeutic places (Scott, 2004). The prison environment and prison service regimes create problems for healthcare providers and the work of mental health inreach teams must be seen in the context of problems that limit their ability to provide care in the same way as community services.

In the years preceding this thesis, there was a large increase in the number of prisoners in England and Wales with the population doubling from 41000 to over 85000 between 1993 and 2012 (Berman & Dar, 2013) and standing at 85892 at the end of recruitment in late 2015 (Ministry of Justice, 2015). During the thesis period, there has also been a large reduction in prison spending (HM Treasury, 2015) leading to prison closures, including the loss of over 6000 prison places, and reductions in prison officer numbers that mean prisons have been described as both overcrowded and understaffed (Howard League for Penal Reform, 2014). The number of prison officers in England and Wales was reduced from 27650 in 2010 to 19325

in 2013 and at the prisons included in this thesis the number of prison officers was reduced by between 25% and 42% over this period. These low staffing levels have meant that prisoners often cannot be escorted between parts of their prison and this affects activities such as work and exercise and this also reduces access to healthcare centres (Prison Reform Trust, 2015). At one of the largest sites for this thesis, the prison regularly exceeds 170% of its officially recommended capacity (Ministry of Justice, 2015). Mental health care services must work within these constraints and whilst wing-based care can reduce the need for escorts, prisoners are often not accessible to health care professionals.

Mental health inreach teams are required to provide support for prisoners with mental health problems who are dealing with a highly stressful period of their life but the methods that they can recommend for managing stress are greatly restricted. A mainstay of mental health care is to recommend lifestyle changes and the adoption of meaningful activities, but this approach is not available to prisoners who are confined to their cells for up to 23 hours a day (HM Inspectorate of Prisons, 2015) and whose recreational and occupational activities are otherwise restricted. This is a longstanding concern but has been exacerbated in recent years by reforms to incentives and earned privileges (Pratt, Grimwood, & Section, 2014) which introduced stricter disciplinary standards for obtaining basic amenities. It has been suggested that in some prisons, including thesis sites, the tightening of regulations has left soap more difficult to acquire than Class A and B drugs (HM Inspectorate of Prisons, 2013; The Economist, 2013). These reforms were packaged as improving rehabilitation and may have been well intentioned but they have resulted in the removal of luxuries and restriction of activities which occupy prisoners whilst they are imprisoned. Some aspects of these reforms have been withdrawn and items such as books and magazines remain freely available but mental health inreach teams are still left with few options to recommend to prisoners seeking meaningful or distracting activities.

Prisoners' backgrounds, with experience of high levels of adversity and social disadvantage from childhood and into adulthood (Brewer-Smyth et al., 2015; Hochstetler, Murphy, & Simons, 2004; Social Exclusion Unit, 2002), mean that those with mental health problems are likely to have wide ranging and complex psychological problems. Mental health inreach teams provide care for prisoners at a time when these problems are exacerbated by the experience of traversing the Criminal Justice System, being imprisoned and facing the problems mentioned in the paragraphs above. Mental health inreach teams rely on ongoing management, medication, and informal psycho-education and support (Offender Health Research Network, 2009). It is likely that prisoners on the mental health inreach team caseload

who have severe mental health problems need a wider range of treatment options, including psychological therapy, and this is recommended by national clinical guidelines (Kuipers, Yesufu-Udechuku, Taylor, & Kendall, 2014). Mental health inreach teams do not have the resources to provide this extra support, and in the majority of cases this is not provided by other prison health care teams.

Most prisoner interactions with staff are with prison officers based on their wing. These officers have to contend with a system that is designed to provide a safe environment for rehabilitation, but that also requires the application of disciplinary procedures and the restriction of privileges (Prison Officers' Association, 2015). As a result, a prison officer may be required to remove a television from a prisoner's cell in response to a disciplinary issue, but also then called upon to provide an assessment of a prisoner's risk of self-harm or suicide. These roles are not easily compatible and lead to conflicting attitudes from prisoners to officers, and vice versa (Dear et al., 2002; Hobbs & Dear, 2000). Mental health inreach teams within the prison have relatively low levels of contact with prisoners on their caseload and it would be useful for prison officers to assist in providing an environment that was conducive to a reduction in mental health problems. Their conflicting roles and a lack of consideration of mental health during prison officer training means this is problematic. Examples of good practice and team working can be found with prison officers being involved in maintaining a therapeutic environment, but when this is the case it is the result of working relationships being built between individuals or due to small scale local initiatives (Edgar & Rickford, 2009).

Despite the challenges that mental health inreach teams face in providing mental health care, their input is generally well received by prisoners. A qualitative study found that the input of mental health inreach team professionals was valued and each of the prisoners interviewed reported that they had a positive rapport with their allocated members of the team (Jordan, 2012). The study highlights aspects of the therapeutic relationship and the content of meetings, with prisoners being given time to lead discussions about past or present problems in a sympathetic and supportive manner being particularly important. Some mental health inreach team evaluations have seen these informal meetings as part of ongoing management as less beneficial than psychological therapy (Offender Health Research Network, 2009), but Jordan's work (2012) suggests that these sessions may themselves prove positive. The study does not mention prisoners' attitudes to medication and it is not clear if this line of questioning was not included or whether prisoners omitted to include this in their positive descriptions of mental health inreach teams' care. Wider scale studies of prisoners' opinions of mental health inreach teams are not available but other sources of evidence do support her

conclusions. At one of the thesis sites, the mental health inreach team has been highlighted as a service that prisoners saw as particularly useful by multiple inspectors (HM Inspectorate of Prisons, 2013; Care Quality Commission, 2013).

For all of these reasons, the prison environment is not conducive to providing mental health care for prisoners and aspects of imprisonment can hinder treatment and recovery. The conflicting goals of imprisonment, poor conditions resulting from overcrowding and the lack of resources invested in the prison system all make providing high quality care challenging. Even with these problems, mental health inreach teams are a valuable resource for prisoners and their input has been shown to be appreciated. Comprehensive policies are needed to address many of the issues that the prison system faces, but in the meantime, care providers must try to address barriers to effective care provision.

2.5. Summary

It is clear that there are high levels of psychiatric morbidity in the prison population and there are a number of factors including prisoners' background and circumstances that mean this is not a surprising finding.

Some health service provision for prisoners with mental health problems has existed in prison for a long time but it has not been a major focus of prison healthcare until more recently. During the 1990s, there was an increase in the evidence for the scale of mental health problems in prison and increasing concern for the lack of suitable mental health care. Healthcare systems which relied on professionals without specific mental health training and *ad hoc* arrangements were recognised to be unfit for purpose and there was a move toward NHS responsibility for prison healthcare.

The development of mental health inreach teams was the last major development in prison health and even though these teams are often under resourced and face great challenges from the prison environment, they have improved provision and assisted in improving awareness of mental health issues across the prison estate. Challenges remain for mental health care provision in prison and the successes of mental health inreach teams do not mean that more improvements are not needed to provide adequate care.

Mental health inreach teams can have a profound impact on prisoners' mental health whilst in prison but the vast majority of prisoners will eventually return to the community. The

interaction of prison and community mental health teams has not been discussed in this chapter but is a key consideration in providing care for prisoners before and after their release. Chapter 3 will consider these issues and discuss the transition from prison to the community and how care is provided in this period.

Chapter 3. Pathways and Transition from Prison to the Community

3.1. Pathways to Release from Prison

The Criminal Justice System (CJS) in England and Wales has numerous stages and a series of points that serve as exit points for those suspected or convicted of committing offences (Clinks, 2012; Grounds, 1995). Typically, prisoners will enter prison after being charged at a police station and the initiation of court based criminal proceedings. For the purpose of this thesis, it is most important to understand the pathways that prisoners with severe mental illness (SMI) take after they enter custody, and also the routes that they follow to transition back to the community. Consideration of these pathways provides important context to the difficulties that prisoners with SMI face on release, and the problems that mental health services face in providing appropriate levels of care. Despite the many stages in the CJS that precede custody, this thesis will focus on the exit points that have consequences for transition to the community, which is the focus of this study.

It is perhaps most appropriate to think about a prisoner's situation at the point of release and to work back from this to delineate the ways that the CJS can be transitioned through. Using this approach, prisoners with severe mental illness can be broadly divided into those who are released from court and those who are released from prison. Figure 1 provides a simplified illustration of this process and the various pathways to release are identified.

Pathways leading to Release from Court

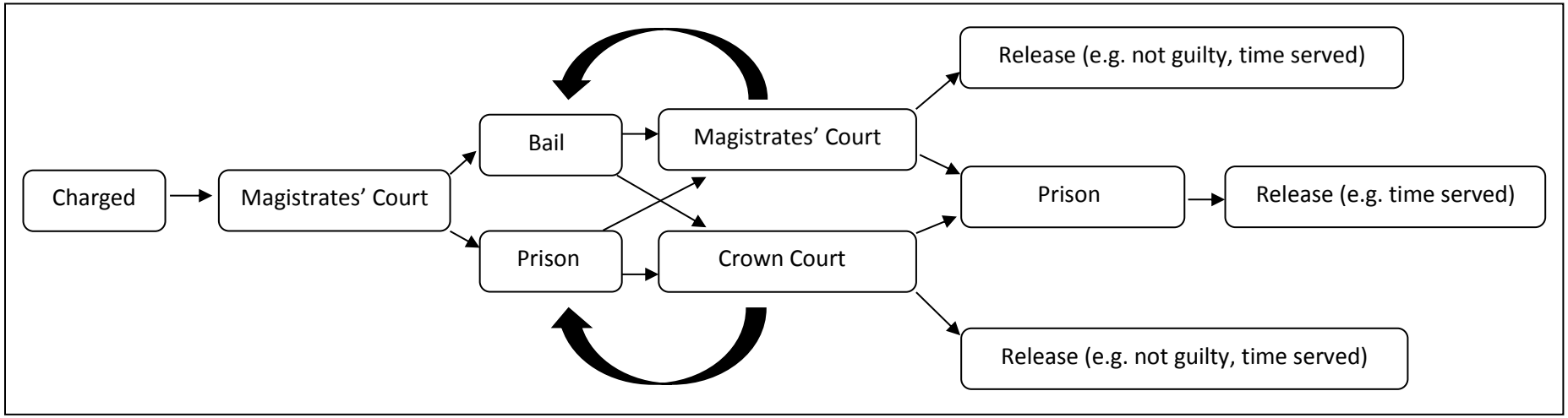
Prisoners can be released from court for a number of reasons, but almost invariably they will be individuals who have been remanded in custody after entering a plea at a Magistrates' Court (Grounds, 1995). After a period on remand, these prisoners will either return to a Magistrates' or Crown Court for their trial to be heard, depending on the severity of their offence. In many cases, prisoners will attend court on a number of occasions and will return to custody on each occasion as their trial progresses. However, there are a few circumstances that will mean a prisoner is released immediately from court. This would be the case, for example, if a defendant is found not guilty, or if a trial collapses due to lack of evidence or procedural errors. It would also be the case if a defendant is found guilty of an offence but is given a sentence that is equal to, or less than, the period that has been spent on remand, or if a judge decides that a community sentence is more appropriate than a return to custody (Home Office, 2006).

Release from court can sometimes be anticipated, but, it is often difficult for those working in prison to predict on which occasion a prisoner will be released. This creates challenges for health professionals working in the prison because they are not able to develop a care plan with a specific date of release and community services are often notified after release has occurred. Due to the presumption of innocence, remand prisoners retain certain rights whilst in custody (Ministry of Justice & Prison Reform Trust, 2008). For example, housing arrangements can be continued for up to a year on remand (Shelter, 2015) and benefits will continue for a short time or will be available after release (Citizens Advice Bureau, 2015). These provisions can ease the transition back to the community, however, housing and financial arrangements are not always in place prior to a period in custody and so will need to be organised for many who find themselves in this situation.

Pathways leading to Release from Prison

For other prisoners, release will take place from prison after being convicted of an offence and being sentenced to a certain period in custody. Many of these prisoners will have followed the procedure described above of attending court but will have been given sentences that are longer than the time they have already served in prison. There may also be prisoners who were previously on bail in the community and now are in custody after receiving a custodial sentence (Grounds, 1995). Another group of prisoners with a distinct pathway are those who have spent time in prison previously and who have been recalled for breaching the agreed conditions for their early release. These prisoners have a series of terms attached to their release and breaking these conditions may mean a return to prison. These prisoners, who are on license recall, will be released after serving the remaining months of their sentence. Finally, some prisoners are held in custody on indeterminate arrangements subject to review by parole boards (Minstry of Justice, 2011). For example, prisoners on a life sentence would usually be released from lower security arrangements than are included in the sites used in this thesis, however, those sentenced to the now abolished intermediate sentence for public protection would be eligible for this thesis. These prisoners do not have a set date of release, however, if a parole board decides release is appropriate a period of time for planning for release is usually included.

Figure 1. Pathways to Release from Prison.



Unlike those released from court, prisoners who are released from prison after serving a predetermined sentence have a date of release that is unlikely to change in the weeks approaching release. This means that health professionals who are assisting prisoners are able to plan according to a specific date. In addition, prisoners are released from the prison gates and into the locality of the prison which allows professionals to better arrange transport to various services. When compared to those released from court, these factors may allow better planning but most sentenced prisoners will be returning to the community having had housing arrangements withdrawn (Shelter, 2015) and benefits stopped (Citizens Advice Bureau, 2015) so prisoners and their service providers face other challenges.

Summary

There are multiple pathways that prisoners can follow to release. These can broadly be divided into being released from court or prison and this also separates those who are released from remand or from a sentence. These factors cause different problems and considerations both for the prisoners and for those that provide their care. However, there has been no previous research on the effect of these different pathways on prisoners' healthcare or on outcomes on release. In addition to the pathways through the CJS, it is important to consider pathways that are taken though prison mental health services and the provision for prisoners with mental health problems after release. Issues related to this are discussed in the following section (Section 3.2.) and a more detailed consideration of how different release arrangements affect outcomes on release is provided later in the chapter (Section 3.4).

3.2. Pathways through Prison and Community Mental Health Services

Introduction

An understanding of the pathways that prisoners with SMI take through prison mental health services is also needed alongside knowledge of pathways to release and this section will focus on the situation in England and Wales. There are initiatives in place in police stations (McKinnon & Grubin, 2010; McKinnon, Srivastava, Kaler, & Grubin, 2013) and in Magistrates' and Crown courts aimed at ensuring that offenders with severe mental illness are identified early and diverted away from custody (Department of Health, 2009; Tim Exworthy & Parrott, 1997) and these have been strengthened since 2009 as a result of recommendations from the Bradley report (Bradley, 2009). These diversion services are mainly available to individuals with an acute episode of illness at the time of offending or at the start of criminal proceedings and

as with pathways through the early stages of the Criminal Justice System these initiatives are important but a full description of them is not required for the purpose of the thesis. This section will focus on the identification of prisoners with SMI in prison, their management by prison mental health services and pathways that are relevant to the transition to the community and transfer of care to community based services. In addition, pathways of care after release will be considered.

Identification of Prisoners with Severe Mental Illness

On entry to prison, all prisoners complete a health screen with a nurse or health care assistant (Birmingham, 2001; Grubin, Carson, & Parsons, 2002; McInerney et al., 2013; National Offender Management Service, 2015). This assessment includes items about a prisoner's legal situation, their physical health and, with most relevance to this thesis, three questions about mental health and contact with services. These questions ask prisoners to indicate yes or no to whether they have received care from psychiatrist outside prison, whether they have taken medication for a mental health problem, or whether they have previously self-harmed or are considering doing so. If a prisoner answers yes to any of these questions, they will be referred to a mental health nurse, who usually belongs to the primary mental health team or mental health inreach team depending on local arrangements, for assessment. This is an important stage for identification of those with severe mental illness, but, this process is often completed at a chaotic and time pressured reception centre and prisoners with severe mental illness are often missed (Birmingham, Gray, Mason, & Grubin, 2000; Birmingham, Mason, & Grubin, 1997).

This reception screening provides a large proportion of the referrals to prison mental health inreach teams and the majority of referrals come from this process or from primary healthcare staff working in other capacities (Brooker & Gojkovic, 2009). This could be from GPs or physical health nurses working within the prison along with health professionals working in substance misuse teams and other agencies. Other prison staff are well placed to refer prisoners to mental health services if they have not been identified at reception screening and prison officers can be well placed to notice social withdrawal, agitation or other symptoms (Birmingham, 1999). Some prison mental health inreach teams have started to operate open referral systems where referrals can come from any source to provide this secondary filter (Pillai et al., 2016; Samele, Forrester, Urquia, & Hopkin, 2016). This can be a rather *ad hoc* approach to identification of mental illness and is not a widespread practice but alongside reception screening can improve rates of identification.

A study focusing on the identification and management of prisoners with SMI (Senior et al., 2012) found that rates of identification were poor and many prisoners with a current episode of major depressive disorder, bipolar disorder or psychosis were missed by existing screening procedures. Patients with psychosis were most likely to be identified, yet, even in this group 53% of cases were not identified and only 35% were accepted on the inreach team caseload for management. Prisoners with recent contact with mental health services were more likely to be identified and assessed by a mental health team and this may well reflect the items in the prison reception screen (Senior et al., 2012). It could be that there are groups of prisoners with current severe mental illness, but who have not previously had treatment, and prison healthcare services do not have the resources to be proactive in using their expertise to identify these individuals with unmet needs (Brooker & Gojkovic, 2009).

Prison Mental Health Inreach Teams and Release

Prisoners identified with severe mental illness and assessed to require secondary mental health care are accepted onto prison mental health inreach team caseload and managed by multidisciplinary teams of mainly forensic psychiatrists and mental health nurses. These teams also include clinical psychologists but usually on a part time basis and their involvement is limited. The development of these teams is described elsewhere (Section 2.3.), however, a consideration of their role in the prison mental health pathway and how they prepare prisoners for release is needed here. After an assessment from a mental health nurse and a psychiatrist, a care plan is devised for a prisoner's time in custody, and if risk of harm to self or others is indicated, prison officers may be asked to provide input through Assessment, Care in Custody and Teamwork (ACCT) procedures (Reeves, 2014). Inreach teams provide ongoing management for prisoners on their caseload and, depending on the prison, day care services or psychotherapy may be available but this is rare (Brooker & Gojkovic, 2009). Inreach teams are also required to plan for release and nurses are involved in discharge planning and notifying community teams of release (Royal College of Psychiatrists, 2015b). However, high levels of referrals and the need to manage risk within the prison limits the resources that can be devoted to transition to the community (Brooker & Gojkovic, 2009).

A prisoner's legal status will affect their pathway through the prison and prisoners who are on remand can pose a problem for provision of care. Sentenced prisoners have a set date of release that a team can plan for, whereas remand prisoners may visit court a number of times and can be released, at short or no notice, at several different stages of the pathway (Section

3.1). This has implications for discharge planning and, whilst there is little research into the effect of this on release, it is reasonable to assume that planning for remand prisoners may be more problematic. For sentenced prisoners, the known date of release allows for a Care Programme Approach (CPA) review meeting to be arranged and prior notification of release from teams in the community, but this may not be possible for remand prisoners due to the lack of certainty about their release date. The Royal College of Psychiatrists standards for prison mental health services states that the final part of the pathway is follow up in the form of written or telephone communication with the prisoner or their new care provider within 14 days of release (Royal College of Psychiatrists, 2015b), however, it is unclear how frequently this is done in practice. Once a prisoner is released to the community, it is the responsibility of community services to resume their care. This is how the pathway should operate. However, one study which examined discharge planning before release found that documented discharge planning was only present for half of cases and direct contact between the inreach team and the CMHT had only taken place in 38% of cases. This clearly indicates that significant improvements in care are needed.

Related Prison Mental Health Services

Prisoners may also have contact with other mental health services in prison and these may come to form part of their pathway. Prisons who become acutely unwell during their time in prison may transferred to a prison healthcare wing (Forrester, Chiu, Dove, & Parrott, 2010) and if suitable treatment cannot be arranged here they may be transferred to an external psychiatric unit (Forrester et al., 2009; Hopkin, Samele, Singh, & Forrester, 2016; Sharpe, Völlm, Akhtar, Puri, & Bickle, 2016). It is possible that prisoners are then discharged from hospital to the community, but, a number return to prison and follow the prison pathway to release (Doyle et al., 2014). In addition, if other services, such as IAPT, are available, referral to community teams may be pursued by relevant professionals and this also forms part of the pathway and transition to the community.

Pathways to Community Mental Health Services

After following pathways related to release (Section 3.1.) and prison mental health services, prisoners return to the community and community mental health services assume responsibility for their care (Royal College of Psychiatrists, 2015a). For prisoners with a severe mental illness who are under CPA, the prison mental health inreach team should make contact with a community mental health team to make them aware of a prisoner's upcoming release.

If possible a CPA meeting should be arranged to take place prior to release, and if this isn't possible, information on a prisoner's progress and treatment should be communicated to primary care and secondary mental health care services (Royal College of Psychiatrists, 2015b). The prison mental health standards also require prison mental health inreach teams to make contact with a prisoner or a care co-ordinator 14 days after release.

Community mental health teams are well established in England and Wales and are effective in managing patients with psychosis and other severe mental illnesses (Burns, 2009; Greenwood, Chisholm, Burns, & Harvey, 2000; Malone, Marriott, Newton-Howes, Simmonds, & Tyrer, 2009; Simmonds, Coid, Joseph, Marriott, & Tyrer, 2001). They receive referrals from primary care or other secondary care services and rely on individual caseloads alongside team working to ensure optimal management. Pathways to these teams are broadly similar across different areas (Cambridgeshire and Peterborough NHS Foundation Trust, 2016; Cardiff and Vale University Health Board, 2016; South London and Maudsley NHS Trust, 2016a; Tower Hamlets CCG, 2015).

Studies suggest that around 10% of those managed by community mental health teams have spent time in prison and offending and aggressive behaviour is an issue that community mental health professionals should be aware of (Hodgins et al., 2009), but community forensic mental health teams may be used to manage more complex cases who present a significant risk of harm (Royal College of Psychiatrists, 2013). There is a lack of high quality evidence comparing general and forensic community mental health teams. They are generally seen as beneficial due to specialist knowledge and care that isn't available elsewhere (National Confidential Inquiry Into Suicide and Homicide by People with Mental Illness, 2010). Despite this, there are anecdotal concerns that some patients are judged as presenting too great a risk for general teams but not enough risk to be managed by a forensic team and they are lost in the gap between these services. This gap in treatment may occur for the group recruited for this thesis who are seen as needing forensic services due to their recent imprisonment but do not pose a greater risk than others managed by community mental health teams (Hodgins et al., 2009).

There are also issues related to waiting times from referral to assessment by community mental health teams and there is developing evidence that delays from referral to assessment need reducing through novel interventions (Ogunbamise, Reardon, Mohoboob, & Lelliott, 2005; Sin Fai Lam, 2016). Royal College of Psychiatrist standards for community mental health teams state that the time between referral and assessment should not exceed three weeks

(Royal College of Psychiatrists, 2015a) and whilst national waiting time standards have been introduced, they relate to the first episode of psychosis (NHS England, 2014). Waiting times are important for prisoners in the transition from prison to the community as they have a finite supply of medication and need support and even three weeks may be too long in this period. If assessment and acceptance onto a team is delayed then this may lead to loss of contact and drop out from services.

Summary

In addition to the pathways that prisoners follow in relation to their legal status and sentences given by the court, there is a pathway through mental health services that operate within the prison and a transition to the community at the end of a period in custody. Prisoners may be identified as needing care from the inreach team at reception or at a later point of their stay in custody and will be managed on the caseload according to their need. At the time of their release from prison or from court, the inreach team should provide discharge planning and make a plan for transition to the community and services outside of the prison. This is made problematic by how the prison pathway functions and discharge planning may not take place or provide an adequate plan for care in the community. In addition to the inreach team, there are other mental health services that may form part of the pathway and some of these may also provide some discharge planning. Community mental health services are widely available in England and Wales and there are pathways to care for prisoners with severe mental illness after release. However, issues related to specialisation and waiting times may have an effect on care.

3.3. Outcomes on Release from Prison

The prison system's purpose is to detain those committed to custody by courts and "to look after them with humanity and help them lead law-abiding and useful lives in custody and after release" (Her Majesty's Prison Service, 2015). A period in custody should be a valuable time for intervention from health and other services in a group who have a complex needs (Social Exclusion Unit, 2002) . However, for a plethora of reasons, time in prison is mostly characterised by enforced passivity (Her Majesty's Chief Inspector of Prisons, 2015) and outcomes on release can be negative. For this thesis, there are three sets of outcomes that are of particular interest. Contact with community health services relates most closely to primary aim of this thesis but adverse health outcomes, such as deterioration of mental health and mortality, need to be considered and due to the forensic nature of this sample reoffending and

reconviction is also important. Literature on the outcomes of prisoners with SMI in the transition from prison to the community is limited. However, research on this period has been conducted with prisoners as a whole and these studies give a good indication of the situation of prisoners with SMI.

Contact with Community Health Services after Release from Prison

Prison can act as a time when health services can have structured and orderly contact with prisoners and health issues can start to be addressed in a controlled environment (Ginn, 2013) in a group who are reluctant to make contact with health services in the community (Social Exclusion Task Force, 2010). However, progress is often lost on release due to a lack of contact with community based services (Social Exclusion Unit, 2002). Due to the organisation of prison and community health services, few prisoners will have follow up from prison based health services on release and are often not provided with the resources that would allow them to continue treatment in the community (Social Exclusion Unit, 2002).

Prisoners have more health needs than the general population with high levels of blood borne viruses and other communicable diseases and poor general health related to poor diet and the use of alcohol, tobacco and other illegal drugs (Mallik-Kane & Visher, 2008; Pocock & Sutton, 2015; World Health Organisation, 2014). However, they are less likely to be registered with general practitioner surgeries and as a consequence will be unable to access secondary care services that are needed for appropriate care. Less than half of prisoners are registered with a GP on entry into the prison and this proportion is unlikely to change on release with the referral process rarely being completed (Social Exclusion Unit, 2002).

A report on health and re-entry to the community in the USA found that released prisoners with chronic physical health problems used emergency health services as a routine method of receiving care as opposed to more planned contacts with primary health services (Mallik-Kane & Visher, 2008). This finding was linked to lack of insurance on release which limits its generalisability but the finding was also seen as a response to lack of continuity and linkage with community services after release (Fox et al., 2014; Hammett, Roberts, & Kennedy, 2001) and similar patterns may be found in England and Wales. In Australia, contact with primary care services in the first month after release (46.5%) is higher than rates of contact for general population samples (Young et al., 2015). However, due to the high rates of health conditions in prisoners and the fact that a transition had recently occurred these levels were seen as

inadequate and the authors concluded that interventions were required to increase these levels (Kinner & Wang, 2014; Young et al., 2015).

Over time mental health services have become more developed in prison (Section 2.3.) but as with physical health continuation of care is needed after release. Lennox et al. (2012) examined the extent of contact with mental health services after release from prison in a sample of prisoners who had been accepted onto a prison inreach mental health team. The study found that evidence of discharge planning and contact with community services before release was limited and only four of 20 released prisoners had contact with community mental health services within a month of release. An earlier study in the USA found that for prisoners who had received mental health case management in prison, only 37% received community case management in the three years after release. Contact with mental health services after release from prison is a clear gap in the literature, however, one further study also found low rates of contact after release with only 30% of those who indicated that they required mental health services making contact within three months (Hamilton & Belenko, 2015). This lack of contact is important for prisoners with SMI as it may lead to medication not being resupplied and means that in an already stressful period, there is a loss of support and a lack of monitoring of mental health related issues. Continuity of care is also important for other long term conditions, such as HIV (Dennis et al., 2015; Haggerty et al., 2003), and there are common problems related to the provision of care on release for physical and mental health conditions and difficulties faced by both types of services (Wohl et al., 2011).

Adverse Health Outcomes

Research has indicated that prisoners do not make contact with community health services after release and this may have an effect on their physical and mental health. There are no studies that use prospective methods to monitor prisoner's health after release, however, lack of contact with services and drop out from treatment are recognised operationally as key problems for released prisoners (Lennox et al., 2012) and in other psychiatric populations this is linked to poorer outcomes. Several studies have reported that community outpatients who drop out of treatment have higher levels of unmet need (O'Brien, Fahmy, & Singh, 2009) and missed appointments are associated with treatment termination, relapse and hospitalisation (Killaspy, Banerjee, King, & Lloyd, 2000). Whilst direct evidence is lacking, it is reasonable to assume that prisoners with SMI who drop out from services on release are at risk of decline and relapse of mental illness. Some individual case studies support this notion with incidents of homicide that are attributable to loss of contact and a deterioration of psychotic symptoms

(Birmingham CrossCity Clinical Commissioning Group, 2014). More research monitoring released prisoners over time is required to strengthen these assumptions.

In addition to these negative health outcomes, mortality in released prisoners is high. In a national sample of released sentenced prisoners, Farrell and Marsden (2008) identified 442 deaths that occurred within 52 weeks of release. In the first two weeks after release, male prisoners were 26 times more likely to die relative to the general population. Over half of deaths were drug related and whilst poly drug use was common, heroin use alone was recorded in 173 (66%) of drug deaths. Few of these deaths are defined as deliberate suicide by coroners and the authors conclude that accidental opioid overdose is the prime cause of death for this group. Whilst the authors focus on drug related deaths, it would appear that other causes of death including road accidents and injury are also elevated compared to statistics for the general population (Office for National Statistics, 2013). A meta-analysis of drug related deaths on release summarises the literature and it confirms that drug deaths are elevated in the 1st two weeks and remain high for at least 4 weeks after release (Merrall et al., 2010) and other studies have found that history of mental disorder is associated with increased risk (Hobbs et al., 2006; Winter et al., 2015).

While these studies examined all-cause mortality, Pratt et al. (2006) specifically examined suicide rates in recently released prisoners. Using the National Confidential Inquiry into Suicide and Homicide by People with Mental Illness database and a Home Office inmate database, they identified all suicides by prisoners within the 1st year of release. The overall rate of suicide in recently released prisoners was 156 per 100 000 person-years and male prisoners were eight times more likely to die by suicide than men in the general population. For women prisoners, the risk is 36 times the rate of women in the general population. Prisoners have a greater number of risk factors for suicide than the general population including socioeconomic deprivation and substance misuse. However, whilst risk of suicide is elevated across the first year in the community, the time of greatest risk is in the month immediately following release suggesting that factors specific to release are implicated (Pratt et al., 2006). As with risk of overdose, a history of mental illness increased the risk of suicide in this period (Lize et al., 2015).

Re-offending

A focus of rehabilitation in prison is beneficial not only for a prisoner, but also for their family, the community and for public safety (Garland, 2001). However, it is well accepted that levels of

re-offending by those released from prison is high. In England and Wales, comprehensive Government statistics show that 45% of adult prisoners are reconvicted within one year of release and for those serving less than 12 months in prison this rises to 57%. The cost of this re-offending is estimated to be in excess of £10 billion.

Few studies have examined the link between psychiatric disorder and re-offending in prison populations and information on this in England and Wales is still sparse. In the USA, there is evidence that those with psychiatric disorders are more prone to reoffending and having repeat incarcerations. In a study of more than 70000 sentenced prison inmates in Texas released between September 2006 and August 2007, Baileggaron et al. (2009) found that prisoners with psychotic disorder or bipolar disorder were 1.7 times more likely to have been incarcerated previously compared with prisoners with no severe mental illness and this risk increased in stepwise fashion as more previous incarcerations were considered to an odds ratio of 2.4 for four previous times in prison. In another large sample comparing prisoners with and without SMI, a survival analysis showed significant differences in return to prison (Cloyes, Wong, Latimer, & Abarca, 2010). Even when other factors were controlled for, the median survival time for the SMI group was 385 days compared to 743 days for the non SMI group.

There are several smaller studies which suggest that psychiatric disorder is associated with lower rates of overall offending (Teplin, 1990) and a systematic review concluded that levels of repeat offending may be comparable to those without mental illness but there was no evidence that psychiatric disorder was associated with lower levels (Fazel & Yu, 2011). However, it was found that associations depended on the comparison group used in the study with the association between psychosis and offending weaker when compared to control groups with other disorders and stronger with members of the general population with no disorder (Fazel & Yu, 2011).

Two recent cohort studies based in Sweden suggest that the relationship between psychiatric disorder and reoffending may be complex and partly rely on other factors. Using a longitudinal cohort study which included an analysis of prisoners who were siblings, Chang et al. (2015) found that a range of psychiatric disorders were associated with violent offending and that these associations were independent of other socio-demographic, criminological and familial factors. In their study, they concluded that whilst substance and alcohol misuse exacerbated violent offending, psychiatric disorders themselves increased the hazard of offending in isolation. These findings conflict with another cohort study released a few years previously. Lund et al. (2013) found that psychiatric disorders were a significant predictor in bivariate

analyses but were not significant when other variables including age at first offence and number of previous convictions were considered in multivariate analyses. The methodological differences between the two studies may explain the disparity with Lund et al. (2013) who considered only those who had had a psychiatric evaluation and Chang et al. (2015) using those eligible from the whole prison population who had not necessarily come to the attention of mental health services.

There is a general consensus that mental illness is associated with increased overall levels of reoffending in prisoner groups (Chang et al., 2015; Fazel & Yu, 2011) and consideration of the methodology used in studies that conflict with this is needed. Furthermore as several authors have noted (Baillargeon et al., 2009; Chang et al., 2015), the availability of community mental health services may be important in determining levels of reoffending. There is a growing consensus that in the absence of treatment, psychiatric disorders are associated with higher level of reoffending and that community care may have a direct role in reducing offending (Keers, Ullrich, Destavola, & Coid, 2013; Ventura, Cassel, Jacoby, & Huang, 1998). Having said this, other factors, such as number of previous incarcerations and ethnicity, may also be implicated in rates of reoffending for released prisoner and these should not be overlooked by researcher and clinicians when planning for release (Hartwell et al., 2009).

Summary

Due to a lack of research on prisoners with SMI returning to the community, a large amount of the literature described above relates to the prison population as a whole but this work gives a good indication of outcomes for prisoners with SMI. Prisoners with SMI and other health problems do not have adequate contact with services and support after release. Recently released prisoners have adverse health outcomes that range in severity from deterioration of health where services could still intervene to mortality either by suicide or other causes. Factors related to being a recently released prisoner may have an effect and while the effect of mental health and lack of contact with services has not been widely researched, it would seem that it must also be implicated in these negative outcomes. Much of the research on the link between psychiatric disorder and reoffending is focused in North America and in countries with large national databases that facilitate cohort methods and it may be that the results are not generalisable to England and Wales and the thesis setting. However, a consensus is developing that psychiatric disorder does not lower the risk of offending and is an important outcome in the face of high level of reoffending in the general prison population that is confirmed by government statistics. The reasons for poor outcomes in the three key areas

described above will be considered further below (Section 3.4.), but the outcomes described here provide a strong rationale for studying this group in more detail and examining how their situation could be improved.

3.4. Reasons for Outcomes on Release

The previous sections (Section 3.1. and 3.2) have described the pathways that prisoners take towards release, both in terms of the Criminal Justice System and prison mental health services. In addition, a range of negative outcomes on release have been described (Section 3.3.). In this section, the nature and reasons for these negative outcomes will be discussed in terms of problems in health service provision, in the prison system and the situation of prisoners on release. This section will draw on relevant policy and research, and where possible will include qualitative insights from existing studies. In some cases, the reasons suggested for poor outcomes in term of health, contact with services and reoffending will be outcomes in themselves and will to a greater or lesser extent be able to be intervened on by health services.

Organisation of Health Services

Low levels of contact with community services in the period immediately after release have been noted in England and Wales (Lennox et al., 2012), and problems related a lack of assistance in accessing services may be part of the problem. Whilst both prison mental health inreach teams and community mental health teams are generally provided by the NHS, they are often run by different health care trusts due to local competitive commissioning arrangements, and prison and community services have little ability to work beyond the barrier of the prison walls leaving prisoners to navigate their own way after release (Centre for Mental Health, 2014). The design and arrangement of mental health services means that continuity of care is difficult across the transition from prison to the community and released prisoners are often left without named contacts in community mental health teams. The division of prison and community mental health services can lead to poor communication and inadequate transfer of information means that community teams do not have the full picture at release (Pope, Smith, Wisdom, Easter, & Pollock, 2013). Continuity as a concept will be discussed in more detail later (Section 5.2).

Prison systems and health services in different countries may not be comparable to those in Europe so conclusions may not be fully generalisable. However, literature from the USA has

also documented problems with the organisation of health services. Binswanger et al. (2011) recruited a sample of prisoners who had been released from Colorado prison less than two months previously and conducted qualitative interviews about the transition from prison to the community and the provision of health services during this period. One of the study's main themes (Binswanger et al., 2011) was the limited continuity of care between prison and community medical care. Released prisoners noted that it was their own responsibility to arrange their care after release, and that this was difficult due to lack of knowledge of the available services and how to engage with them. This applied mainly to long term physical health conditions, but several of the participants had mental health conditions and raised this as a problem. Other studies have highlighted problems related to time delays in Medicaid enrolment (Visher, Kachnowski, La Vigne, Travis, & Center, 2004), but these are not relevant in the United Kingdom.

Community mental health services are well developed in England and Wales and there is a clearly defined pathways to services. However, there may be issues with community mental health teams that delay contact with services and appropriate provision of care. The acceptance criteria of general and forensic teams may cause conflict and prevent timely access to service and delays from referral to assessment may also pose problems during the transition from prison to the community (Section 3.2.).

Problems within the Prison System

Prisoners who do not have SMI also have poor outcomes on release and a consideration of the effect of the criminal justice and prison system on prisoners' outcomes after release is needed, particularly in relation to reoffending. The negative effects of imprisonment and challenges to providing health care have already been discussed (Section 2.1. and 2.4.) and there are other problems which have an impact on the likelihood of positive outcomes on release.

Providing rehabilitation for offenders is one of the guiding principles of prison and is a key rationale for the use of custodial sentences. However, there have been long standing concerns about the lack of focus on this goal and in his latest annual report the Chief Inspector of Prisons states that spending the majority of the time "lying on their bunks in squalid cells watching daytime TV" is highly unlikely to rehabilitate prisoners (p. 13, Her Majesty's Chief Inspector of Prisons, 2015). This report also found that only 25% of prisons were rated 'good' or 'reasonably good' for providing purposeful activity and it was not uncommon for prisoners to spend less than 2 hours out of their cell each day. Even when attempts are made to provide

offending behaviour programmes or education, recently rising levels of violence within prisons undermine their success with prisoners worried about the risk of assault. In addition to problems of availability of activity, measures related to respect have declined under the pressure of staff shortages and increased overcrowding in recent years. The Chief Inspector again notes that prisoners will not make efforts to improve their futures if "their current environment spells out that they are worthless" (p13, Her Majesty's Chief Inspector of Prisons, 2015). It is therefore perhaps unsurprising that levels of reoffending are high (Prison Reform Trust, 2013) when no concerted effort is being made to provide opportunities for prisoners to change their behaviour or learn new skills and there is a lack of support and encouragement when this is available.

Emotional Distress and Situation of Prisoners on Release

The transition from prison to the community is a time of uncertainty and prisoners' stress during this period may have an effect on outcomes after release (Warren, 2015). Binswanger et al. (2011) found that the transition to the community was characterised by fear, stress, anxiety and disappointment and for prisoners with mental health problems transition was associated with fear of what would happen and a worsening of symptoms, particularly paranoia. Some participants also made the link between the strong negative emotional response to release and suicidal thoughts. The disappointment surrounding the transition to the community led some to be ambivalent about staying in the community, with some suggesting that return to prison was more desirable, and others have found that prisoners feel powerless in the face of the restrictions imposed by the Criminal Justice System and felt unable to state that they would not return to crime (Visher et al., 2004) . These feelings may be exacerbated by the breakdown of social support during custody or the avoidance of negative social influences and this loneliness sits in stark comparison to the busy prison environment (Visher & Travis, 2003).

Another study examining trajectories of psychological distress after release (Thomas et al., 2015) found that more than half of participants experienced at least moderate distress at the prospect of release. One groups of participants had very high levels of distress and one group was found to have high levels of distress that increased after release. Mental health indicators and a history of drug use were associated with higher distress trajectories. The negative emotions and distress that are associated with release may be detrimental to released prisoners mental health and influence poor outcomes.

The mental health conditions of prisoners, particularly those with SMI, may also impact on how well they can reintegrate into society and interact with services. The association between psychosis and cognitive impairment is well established (Huddy & Wykes, 2010; Joyce & Huddy, 2004; Vöhringer et al., 2013) and to a lesser extent is present in affective disorders (Beaujean, Parker, & Qiu, 2013). These deficits may lead to difficulties in contacting mental health services as some degree of planning is needed to attend and may also impact on outcomes in other areas of the transition from prison to the community, such as finances and personal care (Schnittker, Massoglia, & Uggen, 2012).

There are also a range of areas that affect outcomes related to health and offending that could themselves be seen as outcomes. In a sample from Baltimore (Visher, Kachnowski, La Vigne, Travis, & Center, 2004) the majority of prisoners stated that they would face financial difficulties on release and whilst some could rely on families for financial support, others had no support networks available. In further samples from Chicago, Cleveland and Houston it was found that 60% of participants were in debt just 2 months after release from prison confirming the extent of financial difficulties (Visher, 2010). Binswanger et al. (2011) report that these financial pressures make employment, rather than health, a priority on release which delays contact with community services. A similar study in Los Angeles again raises each of these issues and draws the link between financial strain and inability to travel to appointments (Chavira, Botello, & Lagomasino, 2016).

Housing is also a major issue for released prisoners. A study in Queensland found that with less than four weeks to go 19% of prisoners did not have accommodation arranged (Kinner & Makkai, 2006) and in New York, it was found that 40 out of 49 prisoners were living with family after release and a number of these thought the arrangement was not sustainable in the long term (Nelson, 1999). Many of these arrangements are reliant on female relatives and increase levels of material hardship in the household (Western, Braga, Davis, & Sirois, 2015). Homelessness is also reported in around 10% of released prisoners (Roman & Travis, 2006). The instability that changes in housing arrangements and the negative effects of homelessness may affect released prisoners health, but also complicates contact with community services and provision of care. If a long term address or place of residence is not known, communication of information and appointments becomes difficult.

Summary

There are a number of reasons for the poor outcomes that are seen on release from prison. The organisation of prison and community health services does not lend itself to continuity of care and specific interventions aimed at this period may be needed to promote this. The prison system does not provide an environment that is conducive to rehabilitation and studies from both the USA and other Western countries suggest that released prisoners have a range of problems that could affect contact with mental health services, health outcomes and reoffending. Research in the United Kingdom has largely been limited in the experience of prisoners while in custody. However, some weak supporting evidence is available from media sources (BBC, 2006) that suggest that the problems faced by prisoners in the US and elsewhere also apply here.

3.5. Chapter Summary

There are a number of pathways that prisoners can follow to release and their return to the community. These pathways can be broadly divided into those that lead to release from court and those that lead to release from prison. For prisoners with a severe mental illness, there also needs to be consideration of pathways that are taken through prison mental health services. These pathways are not mutually exclusive and the way that a prisoner moves through the Criminal Justice System and how they come to release impacts the care that prison mental health services can provide.

As has been demonstrated, released prisoners have poor outcomes in a number of areas. For prisoners with a severe mental illness, the transition from prison to the community is difficult period and there are high levels of drop out from services, with many prisoners making no contact with community mental health services after release. Alongside this lack of contact with community services, the risk of mortality and other negative health outcomes is elevated and levels of reoffending are high.

There are a number of reasons that outcomes are so poor in this period with problems related to health service provision, the prison system and the situation that prisoners find themselves in on release. Some of these problems are well embedded into prison and health systems and would require major changes to their policy, structure and culture, however, it possible that modest interventions could work to mitigate some of their negative effects. Other problems lend themselves to simple solutions and could be resolved through innovative approaches to

care. The following Chapter will outline several strategies to improving care in the transition from prison to the community and will describe the background and model of the intervention that this thesis seeks to evaluate.

Chapter 4. Interventions to Improve Outcomes in the Transition from Prison to the Community

4.1. The Critical Time Intervention

The Critical Time Intervention (CTI) will be trialled in this thesis and a detailed consideration of its development is needed. The CTI will be compared with other interventions in the following sections and the efficacy, effectiveness and acceptability of different approaches identified in a systematic review will be considered.

The Critical Time Intervention Model

The CTI is a time-limited model based on case management, and it aims to bridge between services during a transition from an institution to the community. The CTI follows three phases and allows a health professional to work with a patient both before and after their stay in an institution. In the first phase, which begins before the transition, the CTI manager and patient identify areas of need from five areas: psychiatric treatment and medication management, money management, substance misuse, housing and family relationships. A plan for the transition is then made and the CTI manager begins to prepare for transition by liaising with relevant services. In the second phase, the patient leaves the institution and moves to the community, and the CTI manager should ensure that the patient is being linked to appropriate services. The CTI can also assess whether a consideration has been missed in the planning phase and can alter the plan accordingly. The CTI manager is then able to communicate with different services and make sure there are no gaps in provision or overlap in work that is being completed. In the third phase, the CTI manager takes a step back and observes how systems are working. Finally the CTI manager will transfer care to community services. Throughout the intervention, the CTI manager should work in a supportive and empathic way and should encourage patients to identify problems and take the lead in deciding on solutions. A fuller description of the CTI is given as part of the methods (Section 7.1.5.).

Initial Evaluation of the Critical Time Intervention

The first evaluation of the CTI was based in New York and recruited participants with a severe mental illness who were moving from a 1000-bed homeless shelter to community housing (Susser et al., 1997). The longer nine month CTI model was used and the aim was to establish whether the CTI could create a bridge between institutional care and the community at a time

where poor outcomes had been identified. The participants were randomly assigned to the CTI or treatment as usual and followed up over 18 months through face to face meetings at regular intervals. Given the population, homelessness was determined as the primary outcome and the CTI was found to have a significant effect. Those in the CTI group had significantly fewer homeless nights than the treatment as usual group (30 days v 91 days) and survival analysis revealed that the differences between groups widened over the 18 months. This supports the idea that building bridges with existing community services has enduring benefits and the authors state that the key to this was preventing the CTI worker from becoming the primary source of care.

Several follow up papers have analysed sub groups from this first sample of CTI participants (Susser et al., 1997) with the aim of improving understanding of the intervention's effect on mental health symptoms and also its cost implications. Seventy six of the original participants had completed ratings of symptom severity over six months of follow up and the results of Positive and Negative Syndrome Scale assessments were analysed (Herman et al., 2000). Participants in both groups experienced a reduction in positive symptoms and general psychopathology after six months in the community and participants in the CTI group had significantly reduced negative symptoms in comparison to the treatment as usual group ($\bar{x}$ = -2.9; $\bar{x}$ = +0.5). The analyses of Susser et al. (1997) and Herman et al. (2000) suggest that the CTI is effective for reducing homelessness and symptom severity, and a cost analysis of the full original sample (n=96) found that these improvements were associated with at least equal costs to treatment as usual (Jones et al., 2003). Furthermore, if societal willingness to pay for these outcomes is considered then the CTI can be said to be cost effective.

Further Evaluations of the Critical Time Intervention

The initial focus of the CTI was on homelessness amongst individuals with severe mental illness, however, the authors were clear that this model could be used in other settings where there is a transition from an institution to the community (Susser et al., 1997). The first replication in other settings aimed to examine the intervention's effect on housing and health outcomes in a sample of patients with mental illness released from eight veteran's psychiatric inpatient units (Kasprow & Rosenheck, 2007). The cross sectional study recruited veterans with severe mental illness and combat related disorders in two phases with Phase One receiving usual Veteran Affairs care and Phase Two receiving the CTI after its introduction at the study sites. The groups had few significant differences at baseline and compared to the usual treatment group, those who received the CTI had significantly improved outcomes on a range

of variables. CTI participants had more days of appropriate housing and less in hospital and lower psychiatric and substance misuse severity index scores as well as reduced expenditure on substances. When groups are analysed at three, six, nine and 12 month follow up rather than as a whole follow up period, only outcomes related to housing maintain significance at 12 months. This conflicts with earlier studies that show a growing divergence over 18 months (Susser et al., 1997) and may be due to veterans in Phase One having access to more specialised healthcare services than treatment as usual participants in this previous study and making more contacts with these services as time in the community increased (Kasprow & Rosenheck, 2007).

Another study of the CTI for hospitalised veterans ran concurrently to Kasprow and Rosenheck's (2007) and aimed to evaluate a brief version of the CTI for patients with a severe mental illness leaving psychiatric hospitals (Dixon et al., 2009). Recruiting from acute inpatient units, they found that a shorter version of the CTI with 30 days follow up in the community rather than the original nine months period (Susser et al., 1997) had a significant effect on several outcomes. Participants in the intervention group had a significantly greater number of visits to mental health services over a 30 and 180 day period and there were significantly fewer days between discharge and initial contact with services. Unlike the evaluation of the longer CTI program with veterans (Kasprow & Rosenheck, 2007), there was no effect on psychiatric symptoms, even with negative symptoms analysed on their own. As would be expected by the nature of the CTI model, participants who received the intervention self-reported that they had significantly more help with transition to community services and more information and involvement on decisions regarding medication. This study added to the evidence of the CTI models effectiveness and suggested that a brief intervention with less cost associated was a viable option to improving care (Dixon et al., 2009).

Both the full and brief CTI models have also been shown to be effective in general psychiatric inpatient samples (Herman et al., 2011; Shaffer et al., 2015). The nine month CTI model was used with psychiatric patients who were being discharged from hospital (Herman et al., 2011). Due to policy changes prior to recruitment commencing, participants were recruited from transitional residences within the site grounds not directly from the unit and patients who were randomised to the CTI had improved outcomes which are described across several papers. The participants had a history of homelessness prior to hospitalisation and the primary outcome of the study revealed that the CTI group had a significant fivefold reduction in homelessness over the 18 month follow up. Like in previous work (Kasprow & Rosenheck, 2007), the CTI was also shown to reduce psychiatric admissions (Tomita & Herman, 2012). In a

cohort study of patients released directly from a psychiatric unit, Shaffer et al. (2015) found that a treatment as usual group were 2.83 times more likely to be readmitted within 30 days compared to the group who received the brief CTI, but whilst admission rates were lower in the CTI group over a longer follow up this difference was not significant.

An extension of the Herman et al. (2011) study analysed community reintegration after release using quality of life scales (Baumgartner & Herman, 2012). Earlier studies with veterans had found that whilst quality of life in terms of safety and legal issues were improved for the CTI group, other aspects, including satisfaction with living situation, daily activities and functioning, were not different. Similarly, it was found that patients discharged from hospital showed significantly improved housing stability and lower levels of readmission but no differences on other aspects of Lehman's Quality of Life Interview (Baumgartner & Herman, 2012). Social and physical integration was associated with improved psychiatric symptoms but were not associated with allocation to the treatment group. The authors conclude that whilst the CTI seems to be beneficial for a range of health and housing related outcomes, additional strategies may be needed to promote greater integration (Baumgartner & Herman, 2012) or there may be societal barriers, such as, stigma that need to be targeted.

The CTI has been trialled in countries other than the USA. An evaluation of the CTI in deprived areas of Rio De Janeiro, Brazil (Cavalcanti, Carvalho, Valência, Dahl, & Souza, 2011) used a small sample and indicated that the CTI was feasible and had a positive impact on patient care as assessed by the program staff and their patients. The CTI is also being trialled in Europe and Australia where existing community mental health services may be more comparable to the United Kingdom (Lako et al., 2013; Lette, 2014).

Pilot Evaluation of Critical Time Intervention in Prisons in England

A pilot trial of the brief CTI for prisoners with severe mental illness was conducted in several prisons in London and the North West of England and whilst the results of the study were limited by problems with participant follow up, the intervention appeared feasible in this setting and the findings suggested that it may be effective in this population (Jarrett et al., 2012). Sixty prisoners were randomised to either CTI or TAU and were then followed up via a telephone call at six weeks after release. Only 32 of the prisoners were released and 26 were included in the final analysis. Twenty two prisoners were not released and five were not contactable for follow up. For those who could be contacted, participants in the CTI group had more positive outcomes than those in the TAU group for all outcomes, and for registration

with a GP and receiving benefits these differences were significant. The intervention was feasible and practical to run, with the CTI manager embedded in the prison inreach team, and it was noted by staff that prisoners valued the input of someone who could work with them both before and after release.

Summary

The CTI is aimed at bridging the gap between services in an institution and in the community. It has been trialled and shown to be effective in a number of settings and its evidence base is beginning to grow outside of the USA. There is a clear rationale for trialling the CTI in United Kingdom and in the prison system of England and Wales and a small pilot study found that it was feasible and that it had some significant beneficial effects. The intervention will be compared to other approaches in the remainder of this chapter (Section 4.2; Section 4.3).

4.2. Systematic Review of Transitional Care for Prisoners with Mental Illness

4.2.1. Introduction

A systematic review was conducted to describe and evaluate the efficacy of interventions aimed at improving outcomes in the transition from prison to the community for prisoners with mental health problems. This is important for the thesis as it allows identification of other evidence based interventions that are similar to the CTI and allows a comparison of differing approaches and their efficacy. Other systematic reviews and meta analyses have looked at interventions at all stages of the Criminal Justice System and their effect on health and offending outcomes (Kouyoumdjian et al., 2015; Martin, Dorken, Wamboldt, & Wootten, 2012) but this is the first review to focus on prisoners diagnosed with mental health conditions and interventions that target release and transition from prison to the community.

4.2.2. Method

Search Strategy

The following electronic databases were searched in July 2015

- PsycInfo (1806 to 2015)
- Medline (1946 to 2015)
- EMBASE (1980 to 2015)
- CINAHL (1937 to 2015)
- CENTRAL (1948 to 2015)
- ASSIA (1987 to 2015)

- BNI (1985 to 2015)
- Criminal Justice (1981 to 2015)
- OpenGrey (1980 to 2015)
- BASE Search (2004 to 2015)

A set of search terms was used in each database (Appendix I) and subject headings specific to each database were also used. They related to the population, setting, transition period and design of the study and were trialled before a final list was put together. The Boolean operators “AND” and “OR” were used to combine terms and groups of terms.

The corresponding author of the included articles and other experts in the field were contacted and asked to provide information on any articles which were not identified by the database search. The references of included studies were reviewed to determine whether any other relevant articles are included in these lists.

Inclusion Criteria

A screening tool (Appendix I) was devised according to inclusion criteria related to the population and setting, the type of study design and the type of intervention used. Articles were considered eligible for inclusion if they met all of the following criteria. They studied participants detained in a prison facility, who were diagnosed with a mental health condition and had been released to the community. The design was a trial but due to the low numbers anticipated, this was not restricted to randomised trials and trials with no comparison group were also included. The intervention that was trialled needed to be focused on the transition from prison to the community and could relate to either the pre or post-release period or both. Interventions based on any treatment model were included, as were interventions that were not based on health outcomes (e.g. housing and employment support). Articles were not excluded based on their country of origin and articles that were not in English could be included if a translated version could be accessed.

A registration form detailing the method was submitted to both the Effective Practice and and Organisation of Care Review Group and Schizophrenia Review Group at Cochrane but both groups judged that the systematic review did not fit their scope and a review protocol was not registered.

Analysis

Due to the expected heterogeneity of results, variation in the components used in treatment and the inability to separate the effect of component parts of interventions, a narrative quantitative synthesis was used and included studies were grouped according to whether the intervention was delivered pre or post-release or both.

Quality Assessment

The Effective Public Health Practice Project Quality Assessment Tool for Quantitative Studies (Effective Public Health Practice Project, 2009) was used to determine the strength of the included studies' methodology. The tool assesses studies on the following elements of bias: Selection Bias, Design, Confounders, Blinding, Data Collection Methods, Withdrawals and Drop Outs. An optional rating of intervention integrity and appropriateness of analysis to questions is also included. A dictionary is provide to assist raters in their judgements. Studies are then rated strong if all elements are rated as strong or moderate, moderate if one is rated as weak, or as weak if two are more rated as weak.

4.2.3. Results

Search Results

A total of 12044 articles were identified from the online database search and a further 33 articles were located from expert recommendations and reference checking. After removal of duplicates there were 9140 articles to be screened. The titles and abstracts of these articles were screened and assessed against inclusion criteria. The full texts of 46 articles were retrieved in order to make a final decision on eligibility. Ten articles were found to be eligible for inclusion and these articles concerned nine research studies. Figure 2 presents further information according to PRISMA guidelines (Moher, Liberati, Tetzlaff, & Altman, 2009). Studies were excluded due to being conference proceedings, not being based on data, having no intervention, not being aimed at transition, not being set in prison and using samples not diagnosed with mental health problems. Data was extracted from the 13 included articles and an assessment of quality was made using Effective Public Health Practice Project Quality Assessment Tool for Quantitative Studies (EPHPP). A 2nd reviewer (PG) screened 20% of the

titles and abstracts and duplicated data extraction. A high level of agreement was found (> .8) and disagreements were resolved through discussion.

Characteristics of Included Studies

The majority of the studies were conducted in the USA (n = 8) with one study conducted in England. Five used a wider area which included participants from more rural settings, and four related to a single city and were restricted to urban areas. Most of the studies used adult samples (n = 8) and one used a sample of juvenile offenders. Of the studies in the USA, two recruited samples from jails, three from state prisons and three from mixed correctional facilities. The prison system operates in a different way and the study in England recruited from remand prisons.

None of the studies were restricted to a single disorder and criteria for inclusion in the studies ranged from solely being diagnosed with a mental health problem, being treated by a mental health team within the prison, being adjudged to be of high risk, or being homeless before entry into custody.

Four studies were based on cohorts, either from facilities that did not offer the intervention or from a time when the intervention was not available in the same facility. Two studies were randomised controlled trials. Two were case series with no comparison group and one used a pre-post comparison with outcomes compared to the same time period before contact with the program. Study outcomes ranged from contact with health services (n = 2), Medicaid enrolment (n = 1), recidivism (n = 4), sanctions for treatment non-compliance (n = 1) and place of residence at time of treatment discharge.

Most of the studies were bridging interventions, with intervention provided both before and after release, but there were also examples of care only in the pre (n = 1) or post (n = 2) release period. The majority of the interventions used a mixed approach (n = 8) with case management, psychosocial modules and onward referral represented. The other study focused on Medicaid enrolment (n = 1). In the majority of cases, the intervention was delivered by a clinician (n = 7) and in two the required qualifications were not reported. Table 1 gives a more detailed description of the interventions used in each study.

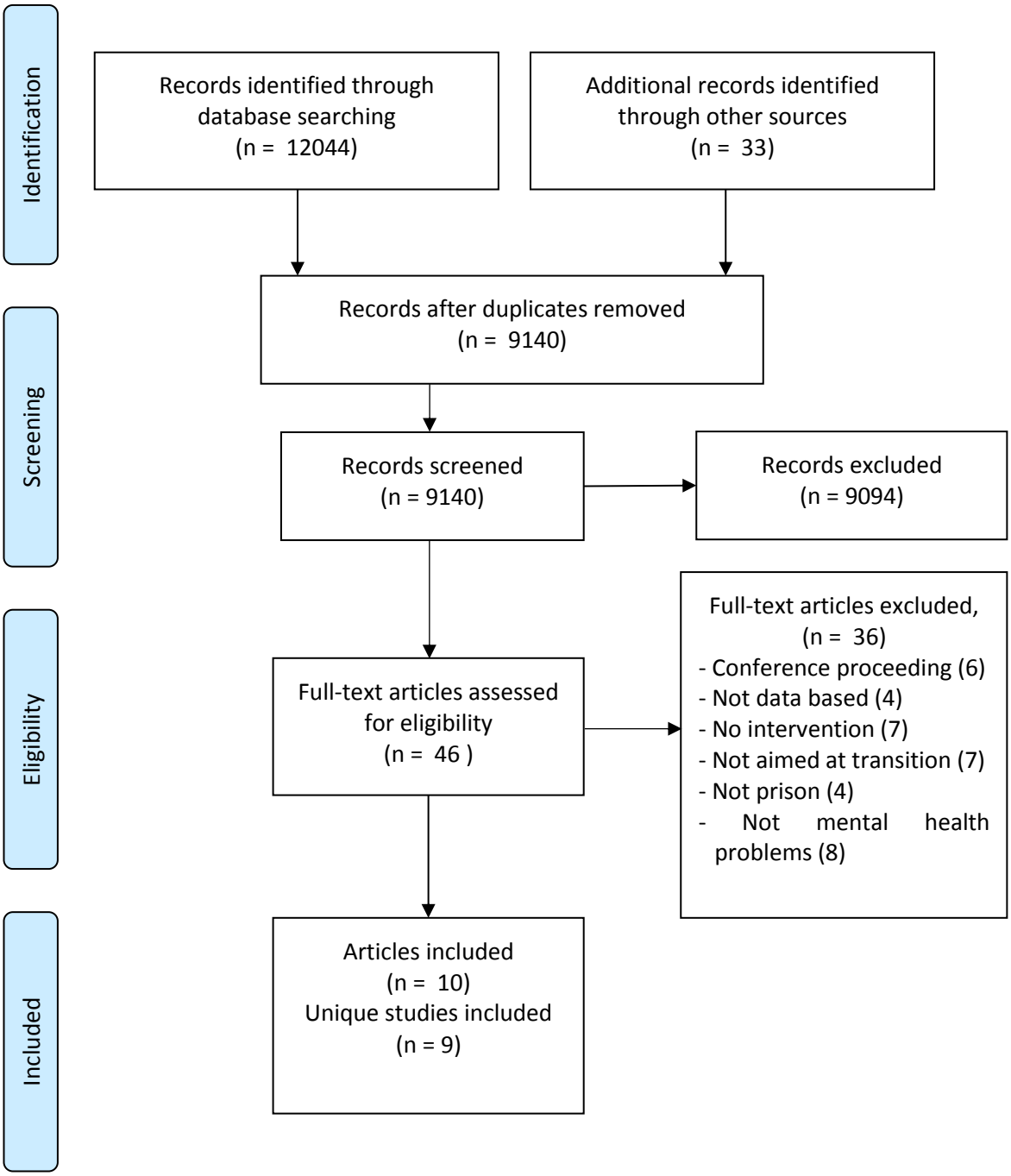


Figure 2. PRISMA Flow Diagram.

Table 1. Sample and Design Information for Studies Included in the Systematic Review

Reference	Location	Facility	Inclusion and Exclusion Criteria	Design	Sample	Data Collection Method	Time Frame
Brown et al. (2013) Buck et al. (2011)	USA Harris County, Texas (Houston)	Jail	SMI Homeless on release 2 or more jail stays in previous 6 months	Pre-Post Comparison	1st paper = 492 2nd paper = 840	Not reported	Not reported
Solomon & Draine (1995)	USA Philadelphia, Pennsylvania	Jail	Released in 4 to 6 weeks SMI Low functioning Recent psychiatric treatment Homeless	RCT	ACT = 60 Forensic Case worker = 60 TAU = 80	Records (Corrections) Follow up interviews.	Not reported
Hartwell & Orr (1999)	USA Massachusetts	Mixed correctional facilities	Not reported	Case series	Discharged from program = 74	Program Records	Program discharge in 1998 and 1999
Jarrett et al. (2011)	England London and the North West	Remand prison	Under care of prison mental health inreach team SMI Due for release Released to local area	RCT	CTI = 32 TAU = 28	Interview at baseline Telephone call at 6 weeks	Released in 2007

Reference	Location	Facility	Inclusion and Exclusion Criteria	Design	Sample	Data Collection Method	Time Frame
Kesten et al. (2011)	USA Connecticut	Mixed correctional facilities	18 years or above 6 to 12 months left on sentence Serious or violent offence Significant psychiatric disorder In need of services	Cohort	CORP = 88 TAU = 883	Records (not specified)	Controls released between 1998 and 2004. Intervention not reported
Roskes & Feldman (1999)	USA Baltimore, Maryland	Prison	Not reported	Case series	n = 16	Program Records	Released between 1996 and 1998
Theurer & Lovell (2008)	USA King County, Washington State	Prison	SMI Judged to be less likely to reoffend if treated Minimum of 3 months in prison Willing to participate In need of housing Excluded if sexual index offence	Cohort	Intervention = 64 Paired Controls = 64	Records (Corrections, Social and Health Services, Mental Health Services)	Released between 1998 to 2003

Reference	Location	Facility	Inclusion and Exclusion Criteria	Design	Sample	Data Collection Method	Time Frame
Trupin et al. (2011)	USA Washington State	Juvenile prison	Between 11 to 17.5 years Co-occuring psychiatric disorder and substance misuse Excluded if sexual index offence	Cohort	Intervention = 105 Control = 169	Records (Corrections)	Released between 2001 to 2005
Wenzlow et al. (2011)	USA Oklahoma State	Mixed correctional facilities	Over 18 years Diagnosed with SMI Required intensive psychiatric treatment in prison Excluded if required 24 hour monitoring in prison	Cohort	Enrolment group = 77 Project facility, baseline = 195 Other facility, baseline = 284 Other facility = 130	Records (Corrections, Mental Health Agency, Medicaid Agency)	Released between 2007 and 2008 Controls between 2004 to 2006

Intervention Effects

Pre-release

The only study of a pre-release intervention aimed to ensure that prisoners with mental illness were enrolled in Medicaid at re-entry (Wenzlow, Ireys, Mann, Irvin, & Teich, 2011). Participants in the intervention group had higher rates of Medicaid enrolment on the day of re-entry (25%) compared with those at the facility before the introduction of the intervention (8%) and comparison facilities without the intervention (3%). When enrolment at entry and other appropriate variables were controlled for, there was a significant difference in enrolment on the day of release (p = .012) and after 90 days (p = .008). The study's secondary outcomes were also significant with more of the intervention group having contact with mental health services (p = .009) and being prescribed drugs (p = 0.041) in the 90 days following release.

Post-release

Two studies examined interventions which were based in the post-release period. Roskes et al. (1999) found that three out of 16 patients received criminal sanction for treatment non-compliance, compared to nine of 16 who had had sanctions previously. The study has no comparison group and previous sanctions were used to demonstrate an effect. This approach is flawed as the comparator relates to a number of previous releases and the length of follow up for included prisoners differed from four to 27 months. Solomon and Draine (1995a) conducted a randomised controlled trial of two interventions compared to usual referral to community services. The study found no significant differences between the conditions and in opposition to the hypothesis, more participants in assertive community treatment (ACT; 60%) returned to prison than those with a forensic caseworker (FC; 40%) or in usual services (36%).

Table 2. Intervention Information for Studies Included in the Systematic Review.

Reference	Stage of Intervention	Description of Intervention	Length of Delivery	Professional Involved	Provider / Funder
Brown et al. (2013) Buck et al. (2011)	Pre and Post-release	Case manager provided case management services to obtain appropriate medical and psychiatric care and housing. Allowed for daytime release and an escort to the local health centre.	Not reported	Clinician. Qualifications not reported.	Homeless for Houston, Harris County Mental Health Authority
Solomon & Draine (1995)	Post-release	ACT: Prisoners were assigned to a local ACT team who provided training in community living, assertive outreach and advocacy FC: Prisoners were assigned to a forensic caseworker who brokered services in the community teams they were based	ACT: 1 year after release FC: Unlimited	ACT: Psychiatrists, mental health nurses, housing specialist FC: Mental health nurses	National Institute of Mental Health, Philadelphia Mental Health Agency
Hartwell & Orr (1999)	Pre and Post-release	Program staff considered information on psychosocial and criminal variables and formulate a plan for release. Staff continue to provide case coordination and consultation after release.	Up to 3 months before and 3 months after release	Qualifications not reported.	Massachusetts Department of Corrections
Jarrett et al. (2011)	Pre and Post-release	CTI manager identified barriers to engagement and provides support and case management before and after release to facilitate contact in the community	Up to 4 weeks before and 6 weeks after release	Mental health professional (i.e. nurse, psychologist, psychiatrist)	Medical Research Council, Psychiatric Research Trust, Oxleas NHS Trust
Kesten et al. (2011)	Pre and Post-release	Prisoners completed the Life Skills Re-entry Curriculum which focused on managing emotions and life skills. After release therapists stayed in contact until links had been made with community services.	Life Skills Re-entry for 9 to 12 months before release. Follow up period not reported.	Psychologist, social worker or other experienced professional	Connecticut Dept. of Correction, Dept. of Mental Health and Addiction Services, US Dept. Of Justice

Reference	Stage of Intervention	Description of Intervention	Length of Delivery	Professional Involved	Provider / Funder
Roskes & Feldman (1999)	Post-release	Team provided medical treatment, case management, psychosocial services and illicit drug use monitoring. Similar to a CMHT model.	Until probation conditions were lifted.	Psychiatrist, MSc level therapist, probation officer	Baltimore City Probation Office
Theurer & Lovell (2008)	Pre and Post-release	Team conducted a pre-release assessment and made a treatment plan for after release. After release intensive case management was provided along with 24 hour crisis support. The team closely coordinate with community correction officers. For part of the study, the intervention included voluntary confinement to a residential site.	Up to 3 months before release Follow up period not reported	Mental health nurses, psychiatrist, substance abuse counsellor, housing manager, community corrections officer	Washington State Dept. Of Social and Health Services, Washington State Department of Corrections
Trupin et al. (2011)	Pre and Post-release	FIT coaches delivered a manualised intervention based on multi-systemic and dialectical behaviour therapy and motivational enhancement. A parent skills training module was also available.	Up to 3 months before release and 6 months after release	MSc level clinician, PhD level consultant, psychiatrist	Washington State Legislature
Wenzlow et al. (2011)	Pre-release	Discharge manager based in the Department of Correction identified prisoners with SMI and arranged Medicaid enrolment for day of release and assisted with federal benefit applications	Up to 4 months before release	Qualifications not reported.	Oklahoma State Mental Health Agency

Pre and Post-release

Six studies used interventions which included pre and post-release care. In two articles reporting on the same sample (Brown, Hickey, & Buck, 2013; Buck, Brown, & Hickey, 2011), it was reported that prisoners with SMI who were expected to be homeless on release were less likely to commit felonies ($p < 0.001$) or misdemeanours ($p < 0.001$) and were less likely to be booked ($p < .001$) or charged ($p < 0.001$) for offences than in the 6 months before contact with the program. In addition, it was reported that the program increased linkage with services ($p = 0.00$; *sic*). It should be noted that the study was rated as weak in the quality assessment, and the reporting of method and analysis was particularly poor. Hartwell and Orr (1999) examined the effect of a forensic transition team and found that at discharge after three months 57% of patients remained in the community, 23% were hospitalised and 10% were reincarcerated. The remaining individuals were lost to follow up. No comparison group was used so no conclusion can be made about its success compared to usual care.

Jarrett et al. (2012) evaluated the Critical Time Intervention in English prisons. A large drop out limited the validity of the results, but a higher proportion of CTI participants had positive outcomes on most outcomes and they were significantly more likely to be registered with a GP (87% v. 38%; $p = 0.01$) and be receiving medication (80% v. 38%; $p = 0.03$). Kesten et al. (2012) compared prisoners referred to Connecticut Offender Re-entry Program (CORP) to standard treatment planning. A lower proportion of those in the CORP group were rearrested within 3 months (9.1% v. 15.6%) and a lower proportion was also arrested in the following three to six months (4.5% v. 12.6%) but these differences were not significant. Theurer and Lovell (2008) compared prisoners in the Washington State Mentally Ill Offender Community Transition Program (MIOCTP) with a matched sample of prisoners from earlier studies. They found that those in the MIOCTP group had an average 2.3 days to contact with mental health services compared to 185 days in the matched control group but significance levels were not reported. They study also found that those in the MIOCTP had lower levels of recidivism for felony (23% v. 42%; $p = .01$) and other offences (39% v. 61%; $p =. 003$). Trupin et al. (2011) evaluated the Family Integrated Transition (FIT) with juvenile offenders. The study found that lower felony recidivism was associated with being in the FIT group ($p < .05$) but this was not the case for overall, violent felony or misdemeanour recidivism.

Quality of Included Studies

Five studies were rated weak according to the Quality Assessment Tool (Effective Public Health Practice Project, 2009), three were rated moderate and one was rated strong. The ratings for each study on the elements of the Quality Assessment Tool are shown below (Table 3.).

Table 3. EPHPP Quality Assessment Tool Ratings for Studies Included in the Systematic Review.

	Overall	Selection Bias	Study Design	Confounders	Blinding	Data Collection Methods	Drop Out
Brown et al. (2013) Buck et al. (2011)	**WEAK**	3	2	3	2	3	2
Solomon & Draine (1995)	**WEAK**	2	1	3	2	2	3
Hartwell & Orr (1999)	**WEAK**	2	3	3	2	2	3
Jarrett et al. (2011)	**WEAK**	2	1	1	3	2	3
Kesten et al. (2011)	**STRONG**	1	2	1	2	2	2
Roskes & Feldman (1999)	**WEAK**	3	3	3	2	2	2
Theurer & Lovell (2008)	**MODERATE**	2	2	1	3	2	2
Trupin et al. (2011)	**MODERATE**	2	2	1	3	2	2
Wenzlow et al. (2011)	**MODERATE**	2	2	1	3	2	2

1 = Strong, 2 = Moderate, 3 = Weak.

Participant or researcher blinding was not described in any of the studies and is problematic in this type of research. Informed consent is required and participants are aware that attempts are being made to link them to community services and to reduce their chance of reoffending. For researchers, blinding is difficult as resources are not often available to remove references to treatment from case notes. Data collection methods and withdrawals and follow ups were mostly of moderate quality as records had face validity but inter-rater or record reliability was not reported or could not be confirmed and record follow up could be done without needing to contact participants. Studies mostly recorded data on confounders and accounted for them in analysis and this variable was mostly rated strong.

Summary

The purpose of this systematic review was to describe and evaluate the efficacy of interventions aimed at improving outcomes in the transition from prison to the community for prisoners with mental health problems. Ten articles from nine studies were included in the review and they all described distinct interventions. Two studies had no comparison group and five of the remaining seven reported significant results on at least one outcome.

The interventions and the methods used to evaluate them were heterogeneous, however, they could be separated by the stage of transition that the intervention is aimed at. One study was aimed solely at the pre-release period and had a significant effect on Medicaid enrolment and related health outcomes (Wenzlow et al., 2011). Two studies were aimed at the post-release period and study with a comparison group found no effect of ACT or a specific forensic caseworker on return to prison (Solomon & Draine, 1995). Six studies evaluated interventions that bridged the transition with both pre and post-release elements. In two studies the intervention had a significant effect on multiple categories of reoffending (Brown et al., 2013; Buck, Brown, & Hickey, 2011; Theurer & Lovell, 2008), however, another only found significant differences on non-violent felony offences (Trupin et al., 2011) and one found a lower proportion of rearrests that were not significant (Kesten et al., 2012). Only two studies used health outcomes. One reported higher proportions of positive outcomes, with registration with GP and receipt of medication significantly higher for the intervention (Jarrett et al., 2012a) and the other reported much lower time to contact with community mental health services but significance levels were not reported (Theurer & Lovell, 2008).

The quality of studies was found to be weak with only one study rated as strong. In addition, few studies reported fidelity of interventions and in one study lack of fidelity was reported as a major limitation (Solomon & Draine, 1995).

4.2.4. Discussion

The systematic review found few studies of interventions aimed at the transition to the community for prisoners with mental health problems. Studies that have been conducted were found to be low quality and randomised controlled trials that have been conducted in this setting and population have used small samples and have large dropouts at follow up. The results of the nine studies are mixed with several studies finding that interventions were

associated with positive effects on reoffending and contact with health services, but others finding no difference or results that suggested more negative outcomes.

The majority of the studies evaluated interventions which included both pre and post-release care, however, the range of findings means it is not possible to conclude which elements were associated with positive outcomes. Studies of interventions that were aimed at the pre or post-release were limited in number and were of a low quality so do not add clarity to whether targeting a particular stage of release is more effective. The interventions also used a wide range of approaches and whilst case management was part of most (n = 8) it differed in intensity and was supplemented by other varied approaches. As with the stage of intervention, there are limited conclusions that can be made about the efficacy of these different approaches.

The methodology of the studies also limits the comparisons that can be made. Both health and offending outcomes were measured in the included studies with some combining both in their design. Three studies reported that reported health outcomes were encouraging and all reported higher proportions of positive outcomes but methodological problems meant that significant results were less frequent. Offending outcomes were mixed and different outcome measures were used with some focusing on return to prison and other focusing on categories of offences. A reduction in felony offences was found in each study that examined this outcome, but other offences were not so conclusive and the distinction between felonies and misdemeanours is not widely used outside of the USA.

Some of the studies highlight important differences in health provision and do not have relevance to the England and Wales context and to this thesis. Medicaid enrolment is not needed in England and Wales as healthcare is universal and free at the point of contact. However, this is an important considerations in countries where enrolment in public health programmes or insurance is necessary for treatment (Wenzlow et al., 2011). Similarly, all prisoners in England and Wales are released in daytime and so modifications to this aspect of release are not needed (Solomon & Draine, 1995). Other studies evaluated interventions which were precursors to services that are now more widely provided. Roskes (1999) evaluated an intervention which is similar to the model of community mental health teams in European countries and in other states in the USA so the intervention cited in this study (Roskes & Feldman, 1999) would be similar to the treatment as usual condition in other studies in this review (Jarrett et al., 2012; Theurer & Lovell, 2008).

Limitations and Future Directions

An extensive list of search terms was used along with subject headings that were appropriate to each database and a number of different databases were searched. However, it is possible that studies have been missed and that more data is available on this question. Studies may also have been published since the search was conducted in July 2015. It is noticeable that only the USA and England are represented in the included studies and it is possible that studies from non-English speaking countries have not been captured. In order to investigate this, a recent textbook on international prison psychiatry was reviewed and no interventions that would have been eligible were cited in chapters on a wide range of countries even though transition to the community was often mentioned (Konrad, Volm, & Weisstub, 2013). Meta analytic methods allow a stronger comparison of studies included in a systematic review but statistical pooling of results was not possible due to the heterogeneity of the methods and interventions of included studies.

The results of this systematic review have important implications for future research and highlight areas for consideration when designing studies aimed at transition from prison to the community. More randomised controlled trials are needed with improved reporting of interventions and statistical data. Fidelity ratings are desirable and both health and offending outcomes are important in this period and efforts should be made to record both. Trials in a range of countries are also necessary as criminal justice systems have large differences and the interaction between prison and health systems also varies.

4.2.5. Conclusion

This systematic review is useful in describing and evaluating existing studies of interventions aimed at the transition to the community for prisoners with mental health problems. It highlights the lack of evidence for providing interventions at transition to the community and demonstrates that studies of a higher quality are needed to give more conclusive answers about the efficacy of intervening at this point. A consideration of the methods and outcomes that are used are also needed to ensure that studies are comparable and can resolve questions about the best models and approaches for improving care in this transition. Studies from other settings that are relevant to this thesis will be discussed below (Section 4.3.).

4.3. Lessons from Other Settings

The systematic review presented in the previous section had inclusion criteria that restricted included studies to those most relevant to this thesis. It is also worthwhile to examine other approaches from other settings, in particular discharge from inpatient units (Vigod et al., 2013), and a number of studies that were identified by the systematic review search but were not eligible for conclusion will be discussed. Transitions from other institutions to the community are important to consider because they often have the separation of service provision outlined earlier (Section 3.4.) and are working with a population that have similar problems as prisoners with SMI. Alternative case management models, psychosocial or skills programme models and other novel interventions will be considered as well as legislation, policy and guidelines which support care across other transitions.

Alternative Case Management Models

The Critical Time Intervention is just one of a range of case management models which has been used and there are a number of approaches that can be followed. Similar approaches to the CTI have been used in psychiatric inpatient settings (Schmidt-Kraepelin, Janssen, & Gaebel, 2009) but there are also open-ended models of care which are more intensive and require greater resources.

A Scottish study trialled a discharge model which shares many features with the CTI but the intervention was not time-limited and would continue until it was agreed by patient and community care provider that a satisfactory therapeutic relationship had formed (Reynolds et al., 2004). The study does not report how long a nurse stayed involved with a patient after discharge and whilst the intervention was effective in reducing hospital readmission, the open ended nature of this intervention adds to cost and may reduce willingness of patients and service providers to develop relationships.

Psychosocial and Skills Re-entry Programmes

Other studies have focused on psychosocial or cognitive skills training programs that have lower cost implications and can be delivered within an institution without the need for contact in the community. The rationale of this approach is that by using education, role playing and

guided self-planning before release, patients are given the skills and confidence that will allow them to leave an institution and independently access services in the community.

The UCLA Social and Independent Living Skills Modules (Liberman et al., 1993) have been used to prepare inpatients for discharge towards the end of their stay. The sessions focus on psycho-education, identification of aftercare issues and strategies for coping with stress and avoiding harmful situations in the community. It also aims to teach everyday living skills like scheduling, appointment keeping and taking responsibility for medication. In one study the most appropriate sessions were selected to give a briefer version and delivered as eight 45 minute sessions (Kopelowicz, Wallace, & Zarate, 1998). The hospital in the study had an average stay of eight days and so the programme was feasible in this unit which, like the prison setting, has a high turnover. Pre discharge interviews suggested that the skills taught in the sessions had been learned by participants even after a short course. Participants in the treatment arm were significantly more likely to attend their first appointment in the community compared to those in an occupational therapy group. However, no information on the frequency or intensity of the session provided to this group was reported. Longer versions of the UCLA re-entry module have also been trialled and found to be effective in improving provision of care after release (Xiang et al., 2007) and it is possible that sentenced prisoners with more planned release dates could benefit from this.

Other Novel Interventions

There are examples of other interventions which aim to improve outcomes for patients discharged from institutions that rely mainly on embedding a modest intervention into usual treatment procedures. These interventions can be implemented with the least increase in cost and do not require extra staff or reorganisation of services.

Telephone follow ups can play an important part in transitional care and are linked to feelings of inclusion in care decisions (Price, 2007). As previous studies have demonstrated, telephone follow up of released prisoners can be problematic (Jarrett et al., 2012) with high levels of drop out when this methodology is used. Released prisoners or patients discharged from other settings may not have access to a mobile telephone on release and housing instability means that there may not a consistent point of contact. A small trial examined whether providing discharged patients with a prepaid mobile phone improved communication and could be used to remind patients about their first scheduled appointment in the community (Price, 2007). A higher proportion of the intervention group attended their first appointment and fewer days in

hospital in the 50 days after release. A prepaid mobile phone could be provided at a very low cost and nurses in the study were only required to have two short phone calls with the patient. The small sample (n = 13) prevented reliable analysis but the study presents an interesting and novel approach.

Legislative and Policy Approaches

The transition based interventions that are described in the systematic review and in this brief review of other options are mostly based on the premise that patients or prisoners with mental health problems will voluntarily engage with services if they are given extra support with making contact. However, there are a group of prisoners with mental health problems who would benefit from community services but may resist these interventions and remain disengaged.

Community treatment orders can be used by courts to make treatment a condition of a non-custodial sentence but there is limited evidence of their success (Burns et al., 2013; Churchill, Owen, Singh, & Hotopf, 2007) and they raise ethical questions about coercion (Pridham et al., 2015). There are suggestions that they can be useful for certain populations and may reduce recidivism and this lends itself to the prisoners with mental health problems. Some authors have suggested that judges or magistrates should be given the option to a hybrid order which provides for a period in custody and a mental health treatment requirement on release (McRae, 2015). As with traditional community treatment orders, this arrangement could compromise the relationship between patients and health professionals and lead to greater levels of prison recall. However, this type of order could be different enough from CTOs that it is worth considering and with appropriate services may improve outcomes.

The interventions that have been described are sometimes funded for research projects or are provided as part of a local initiative. In order for these interventions to become more widespread and for the problems of transition to be confronted, approaches that compel mental health services to provide follow up for prisoners with severe mental illness after they are released may need to be considered. For some patients discharged from psychiatric units, Section 117 of the Mental Health Act (*Mental Health Act*, 2007) compels health services to provide follow up and assist patients during the transition and this could be considered for those released from prison. Alternatively, guidelines like those from the suicide prevention strategy (Department of Health, 2012) which suggest follow up within seven days of discharge from an inpatient unit may be useful. As has been described, many prisoners with severe

mental illness will have spent time in psychiatric inpatient units, either during their current period in custody or previously and as a group are at risk of suicide after release (Pratt et al., 2006).

Summary

There are a range of interventions which can be used to improve outcomes for patients moving across the transition from an institution to other settings. This section is by no means an exhaustive review but it highlights several approaches that have similar goals to the present thesis. The different approaches have varying levels of effectiveness but the lack of homogeneity in approach and methodology means that a rigorous comparison of their impact is not possible. In addition to these interventions, legislative approaches have been used in other settings that provide for involuntary community treatment or that compel health services to provide follow up support. Sections 4.2 and 4.3 have outlined approaches that differ from the Critical Time Intervention and the following section will outline why the CTI may be the most appropriate intervention for prisoners with mental illness who are released from prisons in England and Wales (Section 4.4.).

4.4. Justification for Using the Critical Time Intervention

As has been shown in this Chapter, there are a variety of approaches to improving care in the transition to the community for prisoners with mental health problems and they have differing levels of evaluation and reported efficacy. The CTI and its evidence base has been described but a note is also needed on why the CTI is suitable for this setting and has been chosen for the research project and this thesis.

The systematic review presented a range of other interventions which have been trialled in prison but the quality of these studies was mainly weak or moderate (Section 4.2.). A pilot of the CTI in prison (Jarrett et al., 2012) was included in this review and it has the benefit of being well evidenced in a growing number of other settings (Kasprow & Rosenheck, 2007; Shaffer et al., 2015; Susser et al., 1997) and has been awarded the top tier standard in evidence based social programs (Coalition for Evidence-Based Policy, 2013). In addition, the flaws that were highlighted in the pilot study can be accounted for in this larger trial and modifications to the pilot with be described in the methods (Section 7.1.).

The CTI also fits into the healthcare policy context of England and Wales. Prisoners with severe mental illness should come under the care of community mental health teams once they are released but this often does not happen because of a lack of discharge planning and follow up care during the transition (Lennox et al., 2012). The CTI is time limited in order to bridge prison and community services so is appropriate for this setting, unlike other studies which provide more comprehensive services (Roskes & Feldman, 1999; Solomon & Draine, 1995). In addition, it is anticipated that most of the participants will be recruited from remand facilities where the high turnover would prevent longer programs from being implemented (Kesten et al., 2012).

Finally, the brief version of the Critical Time Intervention has mid-level cost implications (Wolff, 2005). Telephone interventions (Price, 2007) or group psychosocial programs (Xiang et al., 2007) may cost less, but may not have as beneficial effects. Conversely, more comprehensive programmes would cost more but may not needed in England and Wales due to the existing provision of community mental health teams and other services.

4.5. Chapter Summary

The Critical Time Intervention will be evaluated in this thesis and it aims to improve outcomes during and after the transition to the community for prisoners with a mental health problem. It provides additional support both before and after release from prison and tries to ensure that discharge planning takes place and that contact with community mental health services is facilitated. The CTI has a growing evidence base in the USA in a range of settings and a pilot study has confirmed it is feasible in prisons in England and Wales. There are other interventions which have been used in this transition, but published studies of their efficacy are low in number, are of a poor quality and have varied outcomes. In addition, there are examples of other approaches in the transition from other settings to the community that have varying effect. The CTI has been used in this thesis because of its evidence base, its appropriateness to the context and its mid-level intensity and cost. This thesis will allow an evaluation of its effectiveness in the prison setting in England, using a larger sample and more rigorous method than was possible in the pilot.

Chapter 5. Conceptualisation and Measurement of Engagement and Continuity

5.1. Service Contact and Engagement. Concepts and Measurement

Engagement with mental health services is often declared as key to successful treatment. However, it is rarely clearly defined as a concept and it has been measured in a wide range of ways. It appears to be a multi-faceted concept and is often used as a way of assessing a patient's interactions with services as whole. Given its assumed importance, there should be greater focus on its definition and how it should be appropriately measured. Engagement is of significance for this thesis because the Critical Time Intervention aims to improve engagement and a detailed consideration is needed to determine whether it is appropriate to use service contact or engagement as the outcome measure. The following section will describe the concept of engagement and explain why service contact has been used to operationalise engagement as the main outcome measure in this thesis.

The 'Keys to Engagement' report (Holloway, 1999) brought to the fore the need to discuss the treatment of people with severe mental illness who are not well treated by traditional services. The term is used 44 times in the document but engagement is not defined nor operationalised as a concept. Similarly, a more recent review provides an interesting summary of approaches to improving engagement in populations where treatment is problematic, but again does not present a clear definition (Dixon, Holoshitz, & Nossel, 2016). A few sentences are dedicated to their conceptualisation of engagement and describe it as commitment to and willingness to maintain ongoing treatment, but no further details are given (Dixon et al., 2016)

In clinical terms, engagement is recognised as describing patients who are reluctant to attend appointments, are ambivalent about services and are difficult to treat, but if this term is to be used in research as an outcome more clarity around its definition is needed. Once references to battle are excluded, the Oxford English Dictionary's relevant entries define 'to engage' as variously 'to pledge', 'to bind by a contract', 'to enter into an undertaking', 'to bind by moral or legal obligation', 'to commit', 'to entangle', 'to involve', 'to attract and hold fast (attention, interest)' and 'to enter upon or employ oneself in an action' (Oxford English Dictionary, 2016). All of these contribute to an understanding of what engagement or conversely lack of engagement could mean for patients who are difficult to treat and do not interact with services in a way that may be conducive to their recovery. However, they do not explain what engagement would look like in terms of a clinical or health service concept or outcome would look like in research.

Two recent reviews of levels of disengagement from services (Kreyenbuhl, Nossel, & Dixon, 2009; O'Brien et al., 2009) acknowledge that most studies do not adequately define the construct. They found that the most frequent measure of disengagement is loss of contact with services, and in many cases this was measured at only one time point. The most recent study cited by O'Brien et al. (2009) defined disengagement as an active refusal of service contact, or being untraceable over an 18th month period (Schimmelmann, Conus, Schacht, McGorry, & Lambert, 2006). Other studies included in the review did use more flexible approaches to measurement, and in one these patterns of service contact over a 5 year period with multiple follow ups was used (Fischer et al., 2008).

Some studies have defined the construct of engagement in a more comprehensive way and recognised that it cannot be defined simply by whether someone attends appointments or not. Mowbray et al. (1993) recognised that it is too simplistic to dichotomise disengagement and engagement in homeless clients and in their study, engagement status was discussed at weekly meetings. A judgement was then made on whether a client was fully engaged, had limited engagement, or was not engaged according to a research definition. This approach was able to differentiate those who had made a joint plan and were accepting the majority of help given, those who had made a plan and were accepting some but not the majority of help, and those who had screened positive but refused any assessment or help.

Others have developed scales to measure engagement (Hall, Meaden, Smith, & Jones, 2001; Tait, Birchwood, & Trower, 2002) and common features of these measures are appointment keeping, collaboration in designing care packages, communication and openness or help seeking, and adherence to medication. The scales are rated by a community psychiatric nurse or another member of the clinical team. Forensic researchers have also used this approach with the development of the Treatment Engagement Rating scale (Drieschner & Boomsma, 2008) that has been developed in Dutch forensic outpatient units. This tool assesses nine components of engagement (i.e. Session Attendance, Making Sacrifices, Openness, Effort to Change Problem Behaviour, Goal Directedness, Efforts to Improve Socio-Economic Situation, Constructive Use of Therapy Session, Dealing with the Content of Therapy Between Sessions and Global Rating of Treatment Engagement) and is completed by a therapist who rates each of the 21 items on an individualised 5 point scale. The component scores can be analysed separately or combined to give a total engagement score. It is designed to be applicable to a variety of patients and treatment with varying goals and has been shown to predict treatment completion and treatment outcome (Drieschner & Verschuur, 2010) and patient and observer

ratings for these scales have been found to highly correlated (Gillespie, Smith, Meaden, Jones, & Wane, 2004). Studies that have used either psychometric measurements of engagement or structured clinical judgement may be closer to defining engagement and capturing its complexity than the recording of whether someone is still in contact with services.

There are some difficulties in defining and measuring engagement which need to be considered. Some variables may reflect engagement differently across settings and client groups. For example, contacts with mental health services are often used as a measure for engagement but count data on the number of contacts is not able to reflect whether a patient voluntarily attended an appointment at a clinic or was followed up assertively. It is also not able to capture the content of the contact which could vary from an open and willing discussion about treatment options or a hostile disagreement. This problem is demonstrated with assertive community treatment as less well engaged clients are more assertively pursued and therefore have a higher number of contacts (Bale, Catty, Watt, Greenwood, & Burns, 2006). More comprehensive scales (Hall, 2001; Tait et al., 2002) would be more equipped to capture these factors than service contact as they could capture this increased level of contact but lower level of communication, openness and adherence to medication would be recorded.

Engagement also needs to be understood as a dynamic process. Recording engagement at a single time point does not adequately reflect that levels of engagement could change over time in response to a number of factors. Priebe et al. (2005) and Fischer et al. (2008) both acknowledge that people can have periods of disengagement but that they have subsequent contact with services, the latter study suggests that only a loss of service contact for more than two years would reflect a more permanent disengagement from services. Due to this, studies which do not have regular follow up points are limited in their ability to discuss engagement.

When the literature is reviewed it seems that whilst there is no singular definition of the construct of engagement, there is a growing consensus about its central features. In their review, O'Brien et al. (2009) describe it as a complex phenomenon encompassing factors that include acceptance of need for help, the formation of a therapeutic alliance with professionals, satisfaction with help and mutual acceptance and working towards shared goals. This conceptualisation of engagement is similar to that used in the development of scales and the factors used by Hall et al. (2001) and Tait et al. (2002) reflect this. The current definitions of engagement also include its continuous nature and methods of measurement should reflect this with the use of an intermediate category being seen as the minimum requirement (Mowbray, Cohen, & Bybee, 1993).

Contact with mental health services as a whole is not a comprehensive enough measure to make conclusions about engagement and should not be used as a proxy measure for the reasons outlined above. However, in some types of studies service contact may be the most practical outcome and is important in its own right. Using scales for measuring engagement may require more resources than are available in a particular project and measuring contacts from routinely collected data may be more practical. In addition, in some groups that have low levels of service contact, it may be worthwhile firstly investigating how service contact can be improved with larger groups, before measures of engagement are considered. Session attendance has been shown to be correlated with treatment completion and outcome (Drieschner & Verschuur, 2010) and remains a useful outcome for health services research. Studies that use this approach should be explicit that they are measuring service contact and whilst inferences may be made, conclusions about engagement should be qualified.

This thesis evaluates a programme which aims to improve contact and engagement with services and consideration was needed when selecting the appropriate outcome for the analyses. The pilot study of CTI in English prisons used the term engagement (Jarrett et al., 2012) and the NIHR project report include a composite measure that is labelled engagement. However, in this thesis the outcome measure of service contact will be used. Due to the time spent in prison sites recruiting and the number of participants it would not have been possible to use a measure of engagement in the follow up period. In line with the argument presented in this section, it was decided that the data that was collected does not provide enough information to judge engagement after release and follow up periods were too long to capture its dynamic nature. Previous studies have shown that contact with health services in the post-release period is low (Lennox et al., 2012) and so improving levels of any service contact regardless of its quality is an improvement on the current situation. These sessions may not be characterised by openness, help seeking and collaboration, but they at least represent a willingness from the patient to have contact with services and this should be seen as positive step. Service contact also allows mental health services to maintain awareness of a released prisoner's situation and to monitor any changes in risk or mental state.

A criticism of this approach relates to groups of patients who have low levels of contact with services because their mental health condition is stable or in remission and infrequent contacts are sufficient. This would also be the case for patients who were discharged from CMHTs because of an improvement in their condition. For studies using community outpatient samples this would be an issue and a judgement on appropriate levels of care would be

needed. However, for prisoners with SMI who are in the transition from prison to the community, contact is required to form or renew relationships with community mental health services and to ensure medication is continued after release. This period is stressful for prisoners and has many challenges (Section 3.4.) and contact is also desirable to monitor released prisoners mental state and how they are coping with the return to the community.

5.2. Continuity. Concepts and Measurement

Like engagement, continuity is a concept that needs detailed consideration in this thesis. The CTI aims to improve continuity in the transition from an institution to the community and how to conceptualise and measure continuity is therefore a central issue to address. Continuity as a concept first gained prominence in the 1940s and 50s (Bachrach, 1981). However, it was during the process of deinstitutionalisation in the 1960s that it assumed greater importance and became seen as central to the provision of care for patients with mental illness outside of hospital (Adair et al., 2003; Bachrach, 1993). A number of policy documents refer to continuity (Department of Health, 1999) and it is referenced in large scale initiatives such as the Care Programme Approach (Department of Health, 1995).

The concept has been assumed to be crucial to care but it is often noted that it is not well defined (Bindman et al., 2000; Burns et al., 2009; Ware, Tugenberg, Dickey, & McHorney, 1999) and its relation to treatment initiatives and clinical outcomes is not well researched (Mitton, Adair, McDougall, & Marcoux, 2005). The NIHR Service Delivery and Organisation R&D Programme identified continuity as a priority theme (Freeman, Shepperd, Robinson, Ehrich, & Richards, 2001) and in response, a report agreed that the definition and measurement of continuity needs to be re-evaluated (Gulliford, Naithani, & Morgan, 2006).

Bachrach (1981) represents one of the first and most widely cited attempts to collate definitions of continuity in psychiatry based on anecdotal evidence, previous literature and surveys of mental health centres. In the paper, continuity is described as ‘a process involving the orderly, uninterrupted movement of patients among the diverse elements of the service delivery system’ (p.1449; Bachrach, 1981) and this short definition underpins the majority of later attempts to give more precise definition. In a later paper, Bachrach (1993) expanded on her initial work and suggested that there are nine interdependent principles of continuity (administrative climate; access; individualised; flexible; interlinked agencies; continued relationships; collaborative with patient; culturally relative). These principles have formed the basis of further work and have been refined by subsequent studies. Freeman et al. (2001)

proposed six criteria that applied to all health services (experienced; flexible; cross boundary; informational; longitudinal; relational) and added long term care and contextual as two more mental health specific criteria (Freeman, Weaver, Low, Jonge, & Crawford, 2002).

Definitions have traditionally relied on theoretical consideration of continuity. However, more recently studies have used a more experimental approach and aimed to validate themes either through qualitative interviews about the meaning of continuity for service users (Joyce et al., 2004; Ware et al., 1999) or using quantitative methods (Burns et al., 2009). Using qualitative interviews, Ware et al. (1999) and Joyce et al. (2004) investigated patients' understanding and perceptions of continuity and the themes that were identified are similar to earlier definitions (Bachrach, 1981; Freeman et al., 2001, 2002) with flexibility of health services seen as key. Burns et al. (2009) used a quantitative approach to examine the validity of a definition of continuity and a seven factor model emerged which largely agreed with factors identified by Freeman et al. (2001) and Freeman et al. (2002).

Bachrach's (1981) work has given rise to a wide range of definitions and as a number of researchers have warned (Bindman et al., 2000; Greenberg, Rosenheck, & Seibyl, 2002) continuity has in some ways become a catch all term for all goals of service delivery and as such has become difficult to operationalise. This is reflected in the literature above and a large number of ideas about care have become attached to continuity. Some of these ideas appear not only difficult to measure but impractical with current service provision arrangements. For example, Ware et al. (1999) suggest that an aspect of continuity is professionals performing roles outside their domain, and whilst mental health professionals would be used to case management and liaising with other services, it may well be too idealistic to suggest that mental health professionals in the community could perform tasks such as blood tests for reasons other than mental health.

An approach that may be more pragmatic and useful for research is to focus on continuity as the provision of 'orderly, uninterrupted care' as described by Bachrach (1981) rather than more expansive definitions. Johnson et al. (1997) focus on continuity of provision with consideration given to whether a patient remains in touch with services, extent of breaks in provision, continuity of contact with particular professionals and implementation of plans for services. This more simplistic may be most appropriate to focus on for empirical studies and has been used successfully in the past (Bindman et al., 2000).

For the purpose of this thesis, having an allocated care co-ordinator after release from prison will be a primary outcome and fulfils several of the criteria put forward by Johnson et al. (1997) and used in other settings (Bindman et al., 2000). All participants will have a severe mental illness and will have been cared for according to the principles of CPA in prison and they should be followed up by CMHTs after release (Section 3.2.). This outcome does not fully capture continuity but being held on the caseload of an allocated care co-ordinator will give a good indication of whether follow up has been implemented by teams in the community, whether contact is being maintained with a core of named professionals and whether there has been a break in provision of care that the service provider rather than patient is responsible for. As with engagement, results will be seen in this context and conclusions about continuity will not be overstated.

Chapter 6. Synthesis of Introductory Chapters and Scope of the Thesis

In Chapters 2, 3, 4 and 5, a number of topics were selected to give a context to the thesis and the chapters outline a wide range of issues that are related to the content of this thesis. A consideration of how these topics relate to one another and how they relate to the aims and objectives (Section 1.1.) of this thesis is needed prior to considering the methods and findings of the study. There also needs to be a consideration of the scope of the thesis and acknowledgement of what this thesis does and does not set out to achieve.

It is well established that rates of mental health problems are high in prison populations across the World and in England and Wales and it is estimated that over 10000 current prisoners have a severe mental illness (Section 2.1.). The provision of prison mental health services was transformed in the late 1990s and early 2000s with the NHS taking responsibility for these services (Section 2.2.). Alongside this, mental health care of prisoners became a focus for policymakers and prison mental health inreach teams were introduced to manage prisoners with psychosis and other severe mental illnesses (Section 2.3.). These mental health inreach teams do not have the resources to manage all prisoners with mental health problems and they must also contend with a number of challenges in the prison environment (Section 2.4.). The reality of prison mental health services has several implications for the methodology of this thesis and other prison health research. For example, the identification of prisoners with severe mental illness remains problematic (Section 3.2.) and recruitment for this thesis is restricted to those who are held on the caseload of the prison mental health inreach team and have a diagnosis of severe mental illness (Section 7.1.3.). There will be many prisoners with severe mental illness who are not identified during their time in prison and this group will not be considered for this thesis. Other research streams are needed to ensure that identification is improved allowing more prisoners with severe mental illness to receive appropriate care and benefit from the interventions for transition described in this thesis.

This thesis focuses on the transition from prison to the community for prisoners with severe mental illness. This relies on prisoners having spent time in prison custody and then being released either from prison or from court (Section 3.1.). There are a range of negative outcomes that occur after release and the immediate post-release period is the time of greatest risk for mortality (Section 3.3.). The transition from prison to the community can be a stressful period for prisoners and the separation of prison and health services present challenges for provision of care. The Critical Time Intervention is evaluated in this thesis and intends to improve outcomes in this period (Section 4.1.). However, there are serious

questions about the value of remanding and sentencing offenders with severe mental illness to prison and the use of court diversion and community sentencing has been advocated. This thesis only briefly covers this issue and it cannot shed any light on the benefits of community compared to prison disposals. It may be that negative outcomes are inherent to the use of prison for offenders with severe mental illness and the aim of this thesis is to investigate whether contact with services and provision of care in the eventual transition to the community can be improved regardless of this.

Prisoners with severe mental illness have a range of negative outcomes on release, including lack of contact with physical and mental health services, suicide and drug related mortality and reoffending (Section 3.3.). The primary outcomes of this thesis focus on the impact of an intervention on mental health service use and provision and the secondary outcomes include other health service related outcomes. The relevance of contact with mental health services to engagement and allocation of a care co-ordinator to continuity has been discussed (Section 5.1.; Section 5.2.). Both of these outcomes are of interest in their own right and they point to conclusions about these concepts but do not fully capture their complexity. The project that this thesis is derived from will investigate outcomes related to hospitalisation and offending but these will not be focused on in this thesis.

The main focus of this thesis is on the effectiveness of the CTI and predictors of outcomes at six week follow up but the effectiveness of the intervention at six and 12 months follow ups was also examined. In the planning of this thesis, consideration was given to longitudinal analyses and the use of time series analysis but this was not included for several reasons. There is evidence that outcomes are poor in the immediate post-release period and this is especially true for mortality where drug related deaths and suicide peak in the first couple of months after release. This is therefore a justification for focusing on the effectiveness at six weeks and predictors of outcome in this time frame. Additionally, the qualitative component of this thesis focuses on the period immediately after release and follow up qualitative interviews occurred at six weeks after release (Section 7.3.3.). This follow up period overlaps with the primary outcomes of the quantitative component and allows triangulation, elaboration and enhancement through the mixed methods approach (Section 7.4.3.).

All of these issues were considered in the planning of the thesis and are reflected in the methods and analysis.

Chapter 7. Methods

This Chapter will provide an overview of the methods used in the project and cover issues related to the prison sites, identification and eligibility of participants for the trial and randomisation (Section 7.1.). This will be followed by detail on the methods used in the quantitative component of the thesis (Section 7.2.) and then the qualitative component (Section 7.3.). Finally, the approach to mixed methods will be presented (Section 7.4.).

7.1. Overview of Methods

7.1.1. Overview of Prison Sites

Recruitment was originally intended to be from three prison sites, two in the North of England and one in London, but this was subsequently expanded to eight prison establishments with four in the North of England and four in London. Additional sites were used due to low recruitment rates in the initial prisons. This was in part due to the rerolling of "Prison C" from a remand to a resettlement prison which greatly reduced the number of prisoners released at this site but was also due to a higher than anticipated number of prisoners not meeting inclusion criteria (Section 7.1.3.). All sites held only male prisoners and a further description of each site is given below.

Table 4. Information on Prison Sites

Prison Site	Prison Information
A	Category B local prison holding adult males with an operational capacity of ~1200
B	Category B local prison but is also part of the high secure estate with one wing accommodating category A prisoners. The operational capacity is ~1200
C	At the start of the project this prison was a category B remand prison but was rerolled during the course of the study to category C/D. The operational capacity is ~800 adult males
D	Category B local prison holding adult males with an operational capacity of ~1200
E	Category C training prison for adult males with an operational capacity of ~1100
F	Category B local prison with capacity of ~900
G	Category B local prison with an operational capacity of ~1300
H	Category B local prison with capacity to hold 1900

Category A prisons provide the highest level of security and the level of security reduces for prisons rated B, C and D. Category A and B prisons hold a mixture of remand and sentenced prisoners and Category C and D prisons hold more sentenced prisoners.

7.1.2. Identification and Recruitment of Potential Participants

Potential participants were first identified by the clinical teams working within the prison and were referred to the research team. A researcher then met with the potential participant to confirm that they were eligible and to introduce the project. If a potential participant was willing to take part in the project they completed a consent form. At this point, participants were also asked if they would be interested in completing the qualitative part of the study and their willingness was noted.

Due to the recruitment taking place in the prison environment, there were certain parts of the written, informed consent procedure that required emphasis. Refusal to take part in activities in prison can lead to loss of privileges so the voluntary nature of the project was emphasised and potential participants were ensured that there would be no negative consequence of refusing to consent. In addition, potential participants were reassured that their normal health care would not be affected by their decision. Confidentiality was also highlighted and prisoners were assured that the study data would be stored anonymously and that staff in the mental health inreach team would only be notified if issues about risk were raised. Further information on procedures for the quantitative and qualitative studies is detailed in the relevant sections (Section 7.2.1.; Sections 7.3.3 and 7.3.6.).

7.1.3. Inclusion and Exclusion Criteria

The study aimed to recruit prisoners with severe mental illness who were managed by the mental health inreach team. Prisoners were considered for inclusion if they met the following criteria: were male, had a severe and enduring mental illness (Defined as a major depressive disorder, hypomania, bipolar disorder and/or any form of psychosis including schizophrenia, schizoaffective disorder and any other non-affective, non-organic psychosis) and were currently on the caseload of the prison mental health inreach team. They also needed to be expected to be released within the study period and to a geographical area that corresponded with NHS approvals.

Prisoners were excluded if they did not meet the above criteria, if prison staff had security or safety concerns that meant the prisoner could not be seen, were unable to give informed consent, did not speak adequate English, or they had previously participated in the trial and returned to prison. Prisoners were not excluded due to comorbid physical or mental disorders or due to alcohol or drug problems.

7.1.4. Randomisation

Eligible and consenting participants were randomised to the CTI or TAU by block randomisation, stratified by prison, after participants had been consented and baseline assessments were complete. Participants were fully informed about the randomisation procedure and knew that they may receive CTI or TAU. Randomisation was undertaken by the King's Clinical Trials Unit, utilising a process of concealment, using an online system and there was full allocation concealment. Data were entered onto the online InferMed MACRO data entry system that is managed by the King's Clinical Trials Unit. The researcher was notified of the randomisation outcome immediately and communicated this information to the participant, the CTI manager and to the clinical team. Because of the nature of the intervention, it was not possible to blind participants, researchers, CTI managers or mental health inreach team staff to the treatment allocation. The researchers were required to review participants' prison and community mental health records, where information on allocation was usually present, and the project's funding did not allow arrangements to avoid this. In addition, the researchers were based in the mental health inreach team office along with the CTI manager and information regarding allocation was displayed in this office.

7.1.5. Intervention

The CTI is an intensive case management model aimed at the transition from prison to the community. CTI managers provide time-limited direct mental health care where and as needed, for a period of up to six weeks after release. The intervention involves case management work with service users and their families as well as relevant prison and community services and focuses on five key areas. These are psychiatric treatment and medication management, money management, substance abuse treatment, housing crisis management, and life skills training. The CTI is manualised, but is not prescriptive and is based on the needs of each individual client. The intervention includes the following three phases.

Phase 1 is conducted whilst the service user is in prison. The CTI manager engages with the individual and develops a tailor-made discharge package, based on a comprehensive assessment of the individual's needs on release. This typically includes plans for mental health treatment, accommodation, financial and social support. The CTI manager and prisoner meet as often as required to make the discharge arrangements, but contact is usually twice weekly for four weeks leading up to release. In addition, the CTI manager liaises closely with the family

where appropriate and also community services to ensure their availability and preparation for release.

Phase 2 occurs immediately after release and focuses on providing intensive support. In the first two weeks after release the CTI manager maintains a high level of contact, including accompanying people to appointments to help them establish new relationships and introducing the person to new service providers in order to facilitate the development of durable ties. The number of meetings or visits involved is hard to predict as it is directly influenced by the complexity of each case.

Phase 3 begins two weeks after release. Community services assume primary responsibility for the provision of support and services, and the CTI manager focuses on assessing whether the support system is functioning as planned. During this phase, the CTI manager encourages the individual to handle problems on their own. They meet less frequently but maintain regular contact in order to observe how the plan is working and the CTI manager is ready to intervene if a crisis arises. Again, the frequency of meetings is individually determined but is typically at least weekly for a period of four weeks until six weeks after release. Finally, care is fully transferred to community services in order to provide long-term support and work focuses on completing the transfer of care. This phase is usually completed at six weeks after release and ideally concludes with a meeting of the community care co-ordinator, service user and CTI manager.

Throughout the phases in the community, the CTI manager will gradually reduce their role in delivering direct services to the individual and the responsibility for care gradually transfers to community services with the CTI manager assessing where there are gaps or unmet needs.

7.1.6. Treatment Fidelity

The qualifications, role and experience of CTI managers were recorded and throughout the project, researchers met with the CTI manager to assess fidelity of the intervention using a standardised tool (Appendix IV). Assessments were made on each of the following areas according to how many of the participants had received the following aspects of care: early linkage, intensive outreach, three phases, focused, monitoring, time-limited, intake assessment, closing notes. Some areas like caseload size, accessibility in the field and therapeutic approach, clinical supervision and organisational supported were rated generally for the period since the last fidelity rating as they could not be rated at an individual level. The

scores ranged from 0 or not implemented if under 40% of participants had received this aspect of the intervention to 5 or ideally implemented if over 85% or over had received this aspect. The scores for each aspect were averaged and a total fidelity score was given, rounded to the nearest integer (Section 8.1.4.).

7.1.7. Treatment as Usual

Individuals in the control group received treatment as usual. At each of the prisons, they were able to access primary care, secondary mental health and substance misuse services as would usually be the case. Treatment as usual (TAU) was delivered by the prison mental health inreach team and was assisted by other agencies in the prisons. The inreach teams aimed to complete a CPA meeting for each patient prior to release and would invite professionals from prison and community services to these meetings. For sentenced prisoners, inreach teams aimed to notify community teams of the date of release and would provide them with contact details for further information if this was required. For remand prisoners, the teams would aim to check the Prisoner National Offender Management Information System (p-NOMIS) and SystmOne for return from court and community teams would be notified if a patient had been released to the community. p-NOMIS is the operational database for management of prisoners and contains personal information as well as prisoner movement data and SystmOne is the prison health record database. The extent to which this happened at each prison varied according to their resources. The inreach teams were also supported by probation officers and offender managers.

Other services at each of the prisons varied with different third sector and other organisations present. Several charities provided resettlement support at some of the prison sites and at a single prison, an NHS trust employed a criminal justice liaison nurse who followed patients from court to prison. Their main role was in planning for psychiatric hospitalisation if this was needed but they also notified and provided information to community mental health teams and GPs about released prisoners. Another prison site was eligible for this service but the healthcare provider declined this input.

7.2. Quantitative Methods

7.2.1. Procedure

All participants were approached and recruited as outlined above (Section 7.1.2). After completing the consent form, participants completed all baseline measures. After randomisation, the CTI manager and other relevant members of staff were notified of treatment allocation. Prisoners who were released then received the designated treatment (CTI or TAU). Follow up data were collected for a period of six weeks, six months and 12 months after release. These proformas were completed by accessing information held in prison and community health records.

All baseline assessments were conducted between October 2012 and July 2015 and follow-up data were collected between November 2012 and October 2015.

7.2.2. Data Collection and Management

Before recruitment began, all researchers (GH, CS) completed training on the coding of each of the measures and clarified their understanding of each item to ensure uniformity in ratings. Data was initially collected on paper records and was then transferred to an electronic database. The InferMed MACRO database is designed to prevent data entry errors and allows only certain responses to be given. At the end of the trial, 10% of the entered data was cross referenced with paper records by an independent person (RS) and a high level of consistency was found.

7.2.3. Baseline Assessment

One member of the research team (GH, CS) completed the following baseline assessments with participants. Further details on these measures can be found in Appendix II.

Adapted Client Services Receipt Inventory (CSRI): Developed from the CSRI, a proforma designed for the purposes of this study which includes 11 demographic items and 20 service contact items (Beecham & Knapp, 2001).

The Operational Criteria Checklist for Psychotic and Affective Illness (OPCRIT +): The OPCRIT was used to obtain an Axis I diagnosis. OPCRIT + is an electronic checklist of psychopathology items with algorithms for objective diagnosis of psychotic and affective disorders. Participants are asked about a range of mental health symptoms and responses entered into the OPCRIT database to produce a diagnosis (Rucker et al., 2011).

Structured Clinical Interview for DSM-IV Personality Disorders (SCID-II): The SCID-II is a semi-structured interview for the assessment of Personality Disorders. The first part consists of eight open questions on the patient's general behaviour, interpersonal relationships, and self-reflective abilities. The second part has 140 items to be scored as 1 (absent), 2 (sub-threshold), or 3 (threshold) (Spitzer, Williams, Gibbon, & First, 1990). The full SCID- II interview was administered to all participants and any resulting diagnoses recorded.

The Michigan Alcohol Screening Test (MAST): The MAST consists of 22 yes/no questions pertaining to lifetime use of alcohol. Each item is scored 0 or 1, with scores of 10 or more indicating evidence of having had a severe drinking problem at some point in one's life (Selzer, 1971).

The Drug Abuse Screening Test (DAST): The DAST is similar in design to the MAST. It consists of 28 yes/no questions, each scored 0 or 1. Scores of 11 or more indicate substantial problems with drug abuse (Skinner, 1982).

7.2.4. Follow Up and Primary and Secondary Outcome Measures

Follow up data collection took place at six weeks, six months and 12 months after release and at each of these time points, a researcher (GH, CS) collected data on a series of variables relating to health, forensic and other relevant variables by reviewing community mental health records held on an electronic system.

For the purpose of this thesis the primary outcome variables were contact with any mental health professional, allocation of a care co-ordinator and contact with a care co-ordinator. Contact with any mental health professional was defined as any contact with a mental health nurse, psychiatrist, psychologist or other member of staff that was recorded in a patient's clinical notes. Allocation of a care co-ordinator was defined as having a care co-ordinator recorded in the relevant area of a record system or an entry from a mental health professional which stated that they were acting as the care co-ordinator. Contact with a care co-ordinator was defined as any contact with this care co-ordinator that was recorded in a patient's clinical notes.

The secondary outcome variables were: whether a Care Programme Approach meeting had been arranged in the community, whether a care plan was in place, registration with a GP,

whether medication was prescribed, compliance with medication, contact with family, employment, return to prison and whether any nights had been spent living on the street.

For each of the primary and secondary outcomes, an event was recorded if it occurred at any time during that follow up period. For example, contact with any mental health professional was recorded as yes at six week follow up if there was any contact between Week 1 and Week 6. The outcome was recorded as yes for six month follow up if there was any contact between Week 7 and Month 6 and similarly the outcome was recorded as yes if there was any contact from Month 7 to Month 12.

7.2.5. Statistical Analysis

Descriptive Statistics

Descriptive statistics were calculated for all relevant variables using frequencies for categorical data and measures of central tendency for continuous data, depending on skewness. Baselines variables were compared by CTI and TAU groups and the differences between the groups were analysed using Fischer's exact, t-tests and Mann Whitney tests to determine whether there were key differences at baseline.

Primary Outcome Analyses

The primary outcomes of contact with any mental health professional, allocation of a care co-ordinator, and contact with an allocated care co-ordinator were compared for CTI and TAU groups using Fischer's exact tests. The results of these tests will be discussed both as unadjusted p values and as adjusted p values, using Bonferroni corrections for multiple outcomes. Bonferroni corrections give a conservative estimate of significance and uncorrected p values should be reported (Schulz & Grimes, 2005). However, a consideration of type I error is important in trials (Tyler, Normand, & Horton, 2011) and results should be discussed with this in mind. In addition, post hoc calculations were used to determine the power achieved at each of the follow up time points as the numbers required by the *a priori* power calculation had not been met. This post hoc analysis allows an exploration of whether lack of significance was due to inadequate power (Type II error) or was a representation of the true result.

Logistic regression analyses were used to explore predictors of outcomes for contact with any mental health professional, allocation of a care co-ordinator and contact with an allocated care

co-ordinator at six weeks follow up. The following variables were tested for their association with the outcome variables: treatment allocation (discrete), ethnicity (discrete), marital status (discrete), employment status at entry (discrete), accommodation at entry (discrete), legal status (discrete), time in prison (continuous), previous times in prison (continuous), any previous community mental health intervention (discrete), first contact with mental health services (discrete), in contact with mental health services on entry (discrete), any GP involvement with mental health (discrete), receiving mental health care from GP on entry (discrete), contact with mental health services in prison ever first contact with mental health services (discrete), in contact with mental health services on entry (discrete), diagnosis (discrete), self-reported need for help with alcohol problems (discrete), self-reported need for help with drug problems (discrete), self-reported need for help with mental health problems (discrete), personality disorder (discrete), above cut-off for problem alcohol use (discrete), above cut-off for problem drug use above cut-off for problem alcohol use (discrete).

A multivariate logistic regression model was constructed using a forward forced entry selection procedure for each of the primary outcomes at six week follow up. Bivariate analyses were performed first and variables that had some level of bivariate association with the outcome ($p < .2$) were entered into the multivariate model. Multivariate analyses were then performed and variables that were not significant ($p < .05$) were removed from the model in order of lowest significance. Variables relating to age, contact with community mental health services ever and contact on entry to custody were deemed to be important *a priori* and were entered into the model and retained regardless of significance level. The interaction between treatment allocation and legal status was judged to be important because of the different pathways taken to release by remand and sentenced prisoners (Section 3.1.). This was tested in the model but was not significant and was not retained in the final model. This approach was used because literature on predictors of contact with health services after release from prison is limited and it cannot be assumed that predictors of other poor outcomes, such as reoffending, will apply to this specific context. A theory is not being tested so this method is appropriate (Menard, 1995).

For each logistic regression model, diagnostic tests for specification and multicollinearity were conducted and some variables had categories merged to prevent low cell size. This was the case for marital status, accommodation and diagnosis. Log likelihood chi square tests are reported with Cox and Snell's and Nagelkerke's pseudo R^2. Nagelkerke's corrected version of Cox and Snell's is more representative of traditional R^2 and gives a coefficient of between 0 and 1 (Nagelkerke, 1991). Missing data are reported in the results and listwise deletion was

used for the logistic regression models. As the level of missing data was less than 5% for these outcomes it should be seen as inconsequential (Dong & Peng, 2013).

The main focus of this thesis was aimed at evaluating the effectiveness of the CTI at six weeks after release. However, it is also important to establish whether the CTI had an effect over the longer term. The three primary outcomes were also compared at six month and 12 month follow up and Fischer's exact tests were used to establish whether the CTI was effective at improving contact with mental health services, allocation of a care co-ordinator, and contact with an allocated care co-ordinator at six and 12 months after release.

Secondary Outcome Analyses

In addition, nine secondary outcomes were hypothesised to be improved as part of the study and are important in prisoners' transition to the community an analysis of the CTI's effect on these outcomes was also completed. Fischer's exact tests were used to analyse differences between the groups at each time point. Compared to the primary outcomes, there is a large amount of missing data in some of the secondary outcome variables. Missing data were not imputed and cases with missing data were excluded for the relevant analyses. Bonferroni corrections have also not been applied to these analyses and they should be seen as exploratory. These outcomes are not central to this thesis and this approach is justified as there is little existing literature on prisoners' interactions with health services after release and findings may be useful for generating hypothesis in future research. Significant findings are presented in the results (Section 8.1.5.) and other outcomes are shown in Appendix V.

An intention to treat analytical approach was used with participants data analysed according to initial treatment allocation rather than according to treatment adherence or completion (Gupta, 2011). This was appropriate as whilst overall fidelity of the CTI was measured, it was not recorded for each participant. Some participants may have refused help and this reflects what would happen in the course of normal clinical practice. No interim analyses were conducted and all tests for significance were two-tailed. Each step of the analysis was discussed with the King's Statistical Advisory service and with other researchers experienced in these methods.

Sample Size and Power Calculations

The original calculation for the research proposal taking into account the attrition rate in the feasibility trial of 15% (Jarrett et al., 2012), suggested 100 participants randomised in each arm (CTI and TAU) would give 90% power to detect a difference at 6-week follow-up of 50% in the treatment group vs. 25% in the control group (or greater) at the conventional 5% significance level. Thus 85 participants were required in each group at 6-weeks follow-up.

Due to slow recruitment rates, after 120 participants had been randomised these assumptions were checked and it was found that our attrition rate was lower than expected (9%). In addition, it was proposed that reducing the power to detect a difference to 80% would be appropriate. This resulted in a revised target of 146 participants randomised to give 132 participants at six week follow up.

7.3. Qualitative Methods

7.3.1. Participants (Prisoners)

Participants were sampled purposively as recruitment for the project progressed to ensure those in both the CTI and TAU arm, in a number of prison sites and remand and sentenced prisoners were included. This approach to recruitment also ensured that participants interviewed as part of the CTI arm had experience of different CTI managers. It was aimed that 12 participants from the CTI arm and 12 from the TAU arm would be recruited for the qualitative component and interviewed both before and after release. From these two groups the other purposively targeted characteristics would be met which would provide saturation for the analysing their differing experiences and for a comparison of perceptions prior to release and experiences after six weeks in the community.

7.3.2. Topic Guide (Prisoners)

A semi structured interview guide was used to ensure consistency across interviews but participants were also encouraged to raise issues that were important to them and other aspects of prison life and transition were pursued if they were relevant. The topic guide for all prisoners included questions related to needs on release, support from services and previous experiences of support. After release, participants were asked about their thoughts on what they needed on release, the support they had received and their thoughts about the process. They were also asked about contact with the police and about hospital admission. Participants in the CTI arm were also asked about the support received from the CTI manager and their

views on the intervention both before and after release. Some aspects of the interview used a life course interviewing approach (Elliot, 2005) and asked the participants to consider their release from prison and the services they had used in a chronological order. The full topic guide can be found in Appendix III.

7.3.3. Procedure (Prisoners)

During the baseline interview, all participants were informed that they may be approached again to take part in a qualitative interview. If they were agreeable, a researcher (GH, CS) recorded their date of release or future court release dates and approached them again before they were released. Participants were informed that the interview was to gain a better understanding of the process of transition and the experience of prisoners with mental health problems and if they agreed to take part a qualitative consent form was completed. Interviews were completed in rooms off the prison wing or in the prison healthcare facility and efforts were made to these were in quiet areas where privacy could be ensured. Contact details were taken that would enable the participant to be contacted in the community.

The researcher attempted to contact all participants to arrange a follow up interview at six weeks after release. If the participant could be contacted and was open to taking part in the follow up interview, it was arranged at a venue that was convenient for the participant and safe for the researcher. These venues included the participant's hostel, or community mental health team.

The duration of the interviews was planned to take between 30 and 45 minutes. Pre-release interviews were hand transcribed and typed as soon after as possible. This was due to restrictions relating to recording equipment in the prison sites. Post-release interviews were recorded using a dictaphone and transcribed at a later time. After each interview, the researcher (GH) made notes about initial impressions including prominent topics of discussion, the flow of the interview and the interaction between participant and researcher. All interviews were conducted with no third party present so that the participant could express themselves without feeling that they were being observed by anyone other than the researcher.

7.3.4. Participants (Staff)

Participants were purposively sampled to ensure that staff from different prisons, backgrounds and seniority were included as were professionals from prison and the community. These categories were defined at the onset of the project and staff who met these criteria were sought out. It was intended that six members of prison staff and six members of community staff would be recruited.

7.3.5. Topic Guide (Staff)

As with the prisoner interviews, a semi-structured interview guide was used but other issues were pursued if they seemed relevant. Staff were asked to describe their professional role and experiences and then questions were asked about the needs of released prisoners and the problems they faced, the services that were involved in this transition period and the usual process of care. They were also asked what they thought about the CTI and whether its implementation would be practical. The full topic guide can be found in Appendix III.

7.3.6. Procedure (Staff)

Staff were approached by a researcher (GH, CS) and asked whether they would be interested in taking part in a qualitative interview. The staff all had connections to a study prison site or worked in a community mental health team that held responsibility for prisoners who been released from the study sites. Interviews were arranged to take place at a convenient venue, either at a University or the member of staff's place of work, and a topic guide was sent ahead of time if this was requested. Informed consent was obtained and the semi-structured interview guide was followed.

The duration of the interviews was planned to take between 30 and 45 minutes. All but one of the interviews were recorded with a dictaphone and transcribed at a later time. The other was hand transcribed and typed due to being unable to arrange a time or venue outside of the prison for interview. All interviews were conducted with no third party present so that the participant could express themselves without feeling that they were being observed by anyone other than the researcher.

7.3.7. Qualitative Analysis

A thematic framework approach was used to analyse the qualitative data for both prisoners and staff samples. All interview transcripts were read and reread thoroughly to ensure

familiarisation with the content. An initial framework was created deductively based on *a priori* areas of interest to the research questions (e.g. needs and problems faced on release, support from the CTI manager) and quantitative results (e.g. effect of being on remand or sentenced). Transcripts were coded according to this framework and emerging themes that were not covered by the existing framework were added iteratively. Transcripts were then recoded to account for the addition of new themes. A matrix was created for each of the identified themes and participant's quotes were indexed in order to create a visual representation to aid with analysis. The data was examined for similarities and differences between participants' testimonies and patterns in the data were noted using a constant comparative approach. Throughout the process, outliers in the data that would contradict identified themes were searched for and the framework was revised and relabelled accordingly. Striking and explanatory quotes from participants were then selected to illustrate and support themes. Due to the similarities in the topic guides for prisoners and staff the initial frameworks were similar. However, care was taken to ensure that nuances in the different sets of data were captured. To ensure this was the case, prisoner and staff transcripts were first analysed separately and themes specific to each group were sought. After frameworks for the groups were finalised, they were analysed together to search for common and overlapping themes.

Microsoft Word and Excel were used to manage the qualitative transcripts and thematic framework.

7.3.8. Note on the Researcher and Reflexivity

Both of the researchers (GH and CS) were graduate research assistants who had experience of conducting research in prison and other secure mental health settings. Both had training in qualitative methods prior to conducting the interviews and the interviews were discussed at intervals to ensure consistency. The majority of prisoner and staff interviews were conducted by GH (20 out of 25) and the analysis was conducted by GH. After initial coding and creation of a thematic framework by GH, a subset of the interviews were coded according to the framework by another researcher (LN) to check face validity of the themes and reliability of the coding. The themes were then also agreed with a clinician (GT) and another qualitative researcher (SEL).

Qualitative research relies on different methodological assumptions than quantitative work (Section 7.4.2.) and reflexivity is needed to consider the effect of the researcher on the

interview process and identification of meaning and themes. Throughout the qualitative interviews and analysis I tried to be aware of the fact that the data were grounded both in the participant's and my own background, experiences and perspectives and in the relationship between myself and the participant. This was the case with both prisoner and staff participants and a consideration of this is worthwhile.

My background and experiences differ greatly from the majority of prisoners interviewed for the qualitative study. I grew up in a rural and affluent area of England and faced few, if any, adverse experiences during my childhood and adolescence. I have no experience of contact with the police and Criminal Justice System outside of a professional capacity and also have no experience of interacting with health services due to a long term health condition or mental health problems. I also differed in ethnicity from many of the participants and was younger than most but the latter may not have been obvious to them. Having thought about and been aware of these issues, I spent time talking to prisoners outside of the research to gain more of an understanding of the issues they faced and also made concerted efforts to understand participants' point of views. The qualitative interviews begin after a number of participants had been recruited to the quantitative sample and so this also aided my knowledge of the subject matter. Several potential or actual participants made negative comments about my assumed background and made clear that they didn't feel I was able to understand issues that they faced. Some commented that they didn't expect me to understand some of the colloquial language that was used. However, most made no comment on this.

Over the course of completing my PhD, I have had many conversations with friends and acquaintances about prison conditions and the treatment of prisoners with health issues. In addition, there has been a great deal of media attention on prisons due to Government reforms. I strongly oppose sentencing and prison conditions in this country and see much more value in rehabilitation than punishment but I am aware that are a range of other justifiable views on this issue. I am also aware that either due to my experiences working with people in the Criminal Justice System or otherwise, I am sympathetic to prisoners' histories and past experiences and can understand how someone might come to be involved in crime. This may have had an effect at various stages of the qualitative process but I hope this empathetic approach allowed prisoners' to speak openly about their experiences and overcome some of the differences in our backgrounds.

During the project, I spent a great deal of time working with mental health professionals and was often based in the mental health inreach team office at the prison sites. I tried to use this

opportunity to gain an understanding of the issues that prisoners with mental health problems face and the process of working with this population from staff's perspectives. However, unlike the staff participants I did not have any training or experience of clinical practice and this may have affected how I viewed certain issues.

7.4. Quantitative and Qualitative Approaches and Mixed Methods

Research in health and the social sciences has traditionally been divided by the use of quantitative or qualitative methods to answer research questions. However, there is currently a move towards integrating both quantitative and qualitative approaches into a mixed method approach. The quantitative and qualitative methodology used in this thesis is outlined above, but a consideration of the merits of these approaches is needed and the approach to mixed methods used in this thesis is explained below.

7.4.1. Note on the Quantitative Approach

The quantitative approach is grounded in the belief that observations in health services or social science research can be treated in the same way as observations of physical phenomena (Johnson & Onwuegbuzie, 2009). This approach relies on testing stated hypotheses through the collection of objective data and the use of statistical methods. Due to this, purists maintain that objectivity and detachment must be pursued to ensure generalisability. In some areas of health research, particularly in psychiatry and psychology, the quantitative approach has been attractive as it is seen to guarantee scientific rigour and to confer respectability to findings and results (Wyatt & Midkiff, 2006).

The quantitative approach and its grounding in objective data means that is has a number of strengths. The findings that are produced are replicable and refutable and should be independent of the researcher with reporting of significance levels and effect sizes. Large amounts of data can be collected relatively quickly and well-designed studies can measure and control for confounding variables. Additionally, the desire to be seen as a 'real science' is understandable and quantitative methods and outcomes may carry more weight with policy and other decision makers (Johnson & Onwuegbuzie, 2009).

The quantitative approach does, however, have weaknesses that need to be addressed. The emphasis on hypothesis testing may lead to confirmation bias with conflicting information not included in the research design and not being addressed. The focus on generalisability means

that information on specific situations, context and individual differences are missed and the knowledge that is produced is missing in explanatory details (Johnson & Onwuegbuzie, 2009). In addition, by ignoring the individual, quantitative methods may dismiss the importance of their expertise and understanding of their own experiences and situation. For each of these reasons, quantitative methods cannot provide a holistic view of people, their environment and their experiences (Carr, 1994).

7.4.2. Note on the Qualitative Approach

The qualitative approach stems from several philosophies which argue that there are multiple realities and that answering research questions by removing them from time and place is not logical, desirable or in many cases possible (Creswell, 2009; Denzin & Lincoln, 2011; Ritchie, Lewis, Nicholls, & Ormston, 2013). Their methods rely on the recording of rich and detailed data in the form of entire transcripts from group or individual interviews or extensive notes on observed behaviour (Ritchie et al., 2013) and traditionally their style has been informal and comprised of extensive description and empathic commentary (Johnson & Onwuegbuzie, 2009). The qualitative approach has long been overlooked in health research and it is only in recent years that it has come to the fore and has been accepted as a mainstream and necessary addition to previous methods.

The qualitative approach has a number of strengths that lie in the detailed study of a limited number of cases. The approach provides an understanding of people's personal experiences and through this knowledge on how and why processes occur can be obtained. The data is based on the participant or individuals own testimony. This gives insider knowledge that can only be provided by those experiencing the situation at hand and the importance of their beliefs and experience is central to all parts of the method. The qualitative method also lends itself to the presentation of vivid and poignant data and whilst policymakers may be influenced by 'real science', the importance of impactful individual examples shouldn't be overlooked (Johnson & Onwuegbuzie, 2009).

The qualitative approach has weaknesses that need to be addressed and these are often the converse of the weaknesses of the quantitative approach. By the nature of the research, the researcher and their relationship with a participant is likely to have large effect on the content and quality of the data that is elicited. Relatively few people are included in qualitative analyses and findings and results may not be generalizable to other people or settings. High quality qualitative studies with adequate samples should provide overarching themes that are

generalizable, however, due to this perceived weakness some people may deem them to be less credible (Johnson & Onwuegbuzie, 2009). Finally, although smaller samples are used, the collection, management and analysis of the data can be time consuming and expertise is required at all stages of the procedure in a way that is not true of a lot of quantitative data.

7.4.3. Mixed Methods Approach

Quantitative and qualitative researchers have traditionally occupied opposing camps but the need for integration has been increasingly recognised in recent years and researchers have worked to enhance the quality of research and knowledge by creating a framework for using both approaches (Creswell, 2009). The importance of mixed methods approaches in randomised controlled trials of complex healthcare interventions has also been raised (Lewin, Glenton, & Oxman, 2009). This mixed methods approach makes sense as quantitative and qualitative approaches have commonalities. Both quantitative and qualitative use evidence to address questions, they both seek to describe their methods and their data and to draw conclusions, and both attempt to reduce the risk of bias and errors in their interpretations (Johnson & Onwuegbuzie, 2009). The similarities mean that they can be combined and in doing so, the weaknesses of each approach are addressed by the strengths of the other (Creswell, 2009). For example, qualitative data can provide the detailed individual details that quantitative data cannot, and quantitative data can address issues of generalisability and confounding that qualitative cannot.

A number of possible frameworks for mixed methods research have been proposed (Creswell, 2009; Greene, Caracelli, & Graham, 1989; Johnson & Onwuegbuzie, 2009). Greene et al.'s rationales for mixed methods research (Greene et al., 1989), Creswell's typology (Creswell, 2009) and Johnson and Onweugbuzie's practical considerations (Johnson & Onwuegbuzie, 2009) are helpful for defining the approach taken to mixed methods.

Quantitative and qualitative approaches will be combined in this thesis to allow triangulation, through seeking to corroborate results from different methods, and complementarity, through seeking elaboration and enhancement (Johnson & Onwuegbuzie, 2009). Triangulation will allow corroboration of the quantitative outcomes of contact with services or care co-ordinator or effect of having a CTI manager with data from qualitative interviews where participants were asked about these issues. Elaboration and enhancement will take the form of the qualitative interviews and data giving additional explanation of the reasons for levels of contact on release and the processes that lead the CTI and other services to be successful or

not. Participants will be recruited to the quantitative and qualitative arms over the same time period and this approach matches most closely with concurrent triangulation (Creswell, 2009).

The quantitative and qualitative analyses were conducted independently. Their results were then considered together and findings of the quantitative and qualitative study that overlapped were identified and these are described in the results chapter (Section 8.3.). These mixed methods areas were considered during interpretation of the results and are brought together throughout the discussion chapter (Section 9.3.; Section 9.4.) with the results of the two components of the thesis influencing each other.

It was initially envisaged that the two approaches would be given equal status with a large sample of qualitative interviews both before and after release. However, throughout the study it became clear that there would be few post-release qualitative interviews and under recruitment for both pre-release and staff interview. The final analysis therefore gives higher priority or weight to the quantitative results (Johnson & Onwuegbuzie, 2009).

7.5. Ethical Approval

Ethical approval for the study was given by the Research Ethics Committee for Wales in January 2012 (reference number 11/WA/0328). Local research ethics approval and the appropriate site-specific assessments were obtained from the relevant trusts. National Offender Management research approval was given in February 2012 (reference number 184-11). The trial was registered with the ISRCTN under reference number ISRCTN98067793.

Chapter 8. Results

8.1. Quantitative Results

8.1.1. Recruitment to the Trial and Retention at Follow Up

A total of 1685 prisoners were accepted onto the caseload at the study prison sites and were assessed for eligibility (Section 7.1.3.) and of these, 248 were eligible to be recruited into the trial. Prisoners were not eligible for a number of reasons and the most frequent reasons were having a release date after the end of recruitment at the relevant site (n = 657), being released to an area not covered by the approved NHS trusts (n = 335), having less than 4 weeks left in prison (n = 242) and being held on the caseload for reasons other than having an SMI (n = 161). Of the 248 eligible, 152 prisoners consented, and 150 completed baseline measures and were randomised. Sixty nine prisoners declined to take part in the study. Seventy two were allocated to the CTI arm and 78 to TAU (Figure 3.).

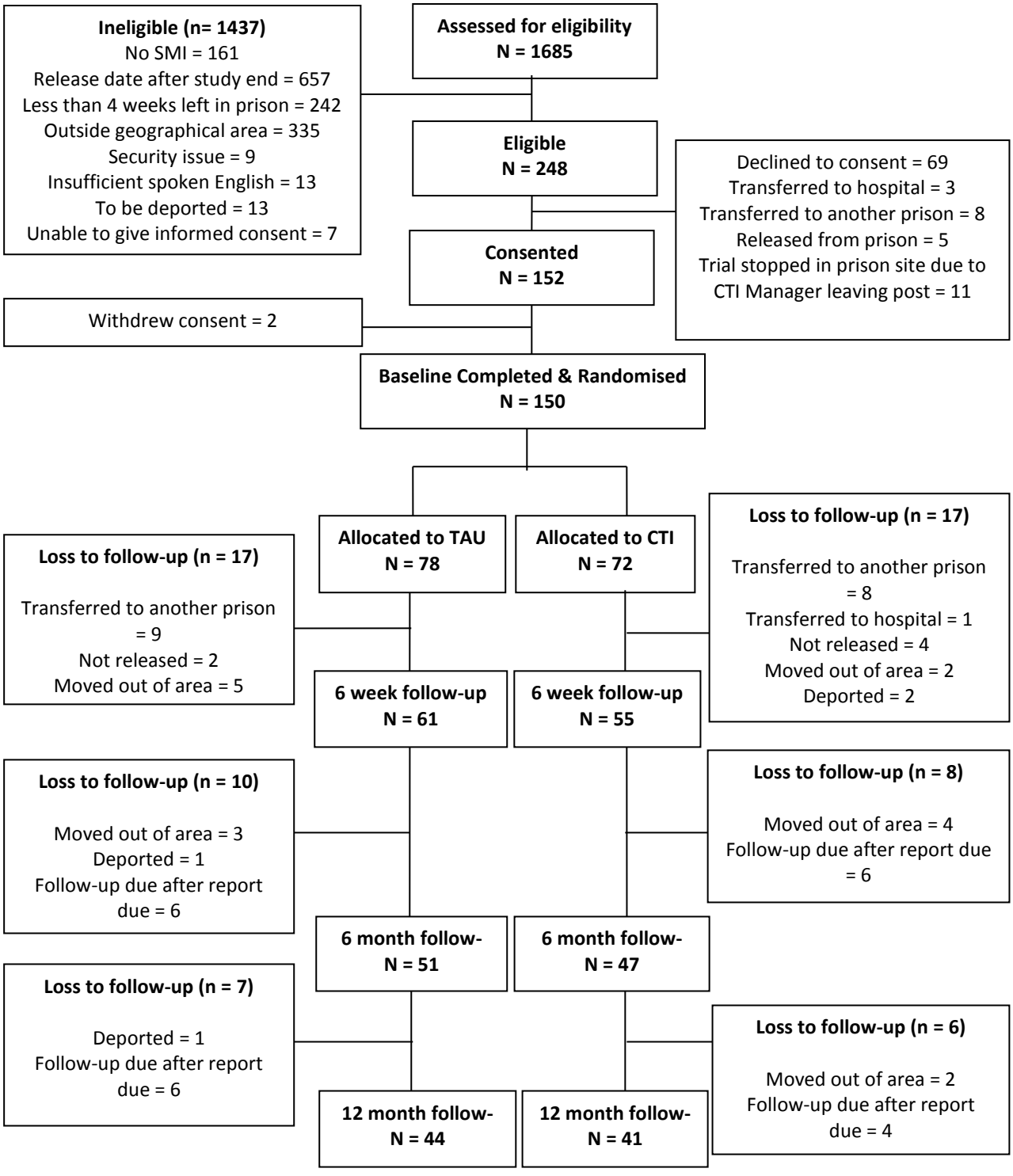
At six week follow up, 116 participants remained in the study with 34 lost to follow up due to being transferred to another prison (n = 17), not being released (n = 6), being transferred to hospital before release (n = 1), moving out of the study area (n = 7), being deported (n = 2) or being deceased (n = 1). At six month follow up, 98 participants remained with 18 lost to follow up in this period due to moving out of area (n = 7), being deported (n = 1) or their follow up date being after the trial finished (n = 12). At 12 month follow up, 85 participants remained with 13 lost in this period due to moving out of area (n = 2), being deported (n = 1) or their follow up date being after the trial finished (n = 10).

Prisoners were recruited from eight prison sites and the numbers at each site as shown in Table 5. The majority of recruitment took place in the four London sites (n = 119) with the remainder in the North West of England.

Table 5. Recruitment of Participants at Each Prison Site

	CTI		TAU		Total	
Prison Site	**n**	**%**	**n**	**%**	**n**	**%**
A	1	1.4	2	2.6	3	2.0
B	6	8.3	8	10.3	14	9.3
C	14	19.4	15	19.2	29	19.3
D	3	4.2	4	5.1	7	4.7
E	4	5.6	3	3.8	7	4.7
F	17	23.6	18	23.1	35	23.3
G	9	12.5	9	12.5	18	12.0
H	18	25.0	19	24.4	37	24.7
Total	72	100	78	100	150	100

Figure 3. CONSORT Chart



8.1.2. Baseline Characteristics of the Sample

Socio-demographic Characteristics

The socio-demographic characteristics of the sample are presented in Table 6. All of the participants were men and the mean age was 36.3 years with a range of 19 to 67. The ethnicity of the group was varied with White being the largest ethnic group (48%) followed by Black (35.3%) and Asian (7.3%). The majority of the sample were single (89.3%), unemployed (56.7%) or on long term health related benefits (32.7%), and were housed (82.0%) but living alone (68.7%).

Table 6. Baseline Socio-demographic Characteristics

	CTI n (%)	TAU n (%)	Total n (%)	p value
Age[a]	36.19 (9.53)	36.47 (10.07)	36.34 (9.78)	*p* = .862
Ethnicity				
White	35 (48.6)	37 (47.4)	72 (48.0)	*p* = .313
Black	24 (33.3)	29 (37.2)	53 (35.3)	
Asian	4 (5.6)	7 (9.0)	11 (7.3)	
Mixed	6 (8.3)	1 (1.3)	7 (4.7)	
Other	1 (1.4)	3 (3.8)	4 (2.7)	
Prefer not to answer	2 (2.8)	1 (1.3)	3 (2.0)	
Marital				
Single	65 (90.3)	69 (88.5)	134 (89.3)	*p* = .795
Partner	7 (9.7)	9 (11.5)	16 (10.7)	
Employment				
Employed	10 (13.9)	6 (7.7)	16 (10.7)	*p* = .423
Unemployed	38 (52.8)	47 (60.3)	85 (56.7)	
Benefits	24 (33.3)	25 (32.1)	49 (32.7)	
Living Circumstances				
Alone	57 (79.2)	46 (59.0)	103 (68.7)	*p* = .061
With partner	6 (8.3)	10 (12.8)	16 (10.7)	
With family	7 (9.7)	17 (21.8)	24 (16.0)	
With friends	2 (2.8)	5 (6.4)	7 (4.7)	
Accommodation				
Homeless	17 (23.6)	10 (12.8)	27 (18.0)	*p* = .094
Housed	55 (76.4)	68 (87.2)	123 (82.0)	

[a] Mean and Standard Deviation reported

Clinical Characteristics

The clinical characteristics of the sample are presented in Table 7. As measured by the OPCRIT, most participants had either schizophrenia or schizoaffective disorder (78%) with the remainder having a non-organic or atypical psychosis (6%), bipolar disorder (7.3%) or

depression (7.3%). Two participants had no disorder according to OPCRIT criteria. 53% had a personality disorder and antisocial personality disorder was found most frequently. Over half of the sample were above the cut-off on the DAST indicating problematic use of drugs (55.4%) but the majority did not reach the cut off on the MAST indicating problematic use of alcohol (33.3%).

The final items of the OPCRIT asked participants to self-report whether they needed help in several areas. For problems related to alcohol, 16.7% indicated that they thought they needed help. For problems related to drugs, 32.0% indicated that they needed help and for mental health problems, 74.7% said they needed help.

Table 7. Baseline Clinical Characteristics

	CTI n (%)	TAU n (%)	Total n (%)	p value
Diagnosis				
No Disorder	2 (2.8)	0 (0.0)	2 (1.3)	*p* = .515
Schizophrenia / Schizoaffective	57 (79.2)	60 (76.9)	117 (78.0)	
Other Psychosis	3 (4.2)	6 (7.7)	9 (6.0)	
Bipolar Disorder	6 (8.3)	5 (6.4)	11 (7.3)	
Depression	4 (5.6)	7 (9.0)	11 (7.3)	
Personality Disorder				
No	34 (47.2)	36 (46.2)	70 (46.7)	*p* = 1.000
Yes	38 (52.8)	42 (53.8)	80 (53.3)	
Above cut-off for problem alcohol use				
No	44 (61.1)	56 (71.8)	100 (66.7)	*p* = .171
Yes	28 (38.9)	22 (28.2)	50 (33.3)	
Above cut-off for problem drug use				
No	31 (43.7)	35 (45.5)	66 (44.6)	*p* = .869
Yes	40 (56.3)	42 (54.5)	82 (55.4)	
Self-reported need for help with alcohol problems				
No	59 (81.9)	66 (84.6)	125 (83.3)	*p* = .669
Yes	13 (18.1)	12 (15.4)	25 (16.7)	
Self-reported need for help with drug problems				
No	43 (59.7)	59 (75.6)	102 (68.0)	*p* = .053
Yes	28 (40.3)	19 (24.4)	48 (32.0)	
Self-reported need for help with mental health problems				
No	17 (23.6)	21 (26.9)	38 (25.3)	*p* = .709
Yes	55 (76.4)	57 (73.1)	112 (74.7)	

Forensic Characteristics

The forensic characteristics of the sample are presented in Table 8. The sample were detained for a wide range of offences. The modal groups were violent offences (35.3%) which ranged

from assault to homicide and acquisitive offences (36.0%) which ranged from shoplifting and fraud to burglary. Drug (6.0%), sexual (6.7%), property (5.3%), weapons (4.7%) and harassment related offences were also represented. Most had spent time in prison before (82.7%) with 31.5% having one to three previous stays, 22.8% having four to seven stays and 28.2% having over eight previous stays. The majority of the sample were convicted as opposed to on remand at the time of recruitment (69.3%).

Table 8. Baseline Forensic Characteristics

	CTI n (%)	TAU n (%)	Total n (%)	p value
Offence				
Violent	28 (38.9)	25 (32.1)	53 (35.3)	*p* = .644
Acquisitive	22 (30.6)	32 (41.0)	54 (36.0)	
Property	5 (6.9)	3 (3.8)	8 (5.3)	
Drugs	3 (4.2)	6 (7.7)	9 (6.0)	
Harassment	3 (4.2)	5 (6.4)	8 (5.3)	
Sexual	6 (8.3)	4 (5.1)	10 (6.7)	
Weapons	4 (5.6)	3 (3.8)	7 (4.7)	
Begging	1 (1.4)	0 (0.0)	1 (0.7)	
Legal Status				
Remand	18 (25.0)	28 (35.9)	46 (30.7)	*p* = .161
Convicted	54 (75.0)	50 (64.1)	104 (69.3)	
Previous Time in Prison				
No	12 (16.7)	14 (17.9)	26 (17.3)	*p* = 1.000
Yes	60 (83.3)	64 (82.1)	124 (82.7)	
Number of Previous Times in Prison				
0 times	12 (16.7)	14 (18.2)	26 (17.4)	*p* = .556
1 to 3 times	22 (30.6)	25 (32.5)	47 (31.5)	
4 to 7 times	20 (27.8)	14 (18.2)	34 (22.8)	
8+ times	18 (25.0)	24 (31.2)	42 (28.2)	

Service Contact Characteristics

The service contact characteristics of the sample are presented in Table 9. Almost all of the sample had received mental health care prior to contact with the inreach team in this period of custody (97.3%) and the first contact with services had taken place over 5 years previously in 64.7% of cases. Few participants had made their first contact with services in the year preceding recruitment (14.7%). Previous contact with community mental health services was common (80.7%), as was contact with a GP for reasons related to mental health (70.7%) and the majority of participants who had been to prison before, had had contact with prison mental health services (76%). Despite having previous contact with mental health services, only 54.7% were receiving care on entry to prison and less were in contact with a GP for reasons related to mental health (32.0%). Few were receiving intervention from drug (15.3%)

or alcohol (2.8%) services on entry and in prison few received any psychological therapy (8.0%).

Table 9. Baseline Service Contact Characteristics

	CTI n (%)	TAU n (%)	Total n (%)	p value
Ever received mental health care				
No	3 (4.2)	1 (1.3)	4 (2.7)	*p* = .351
Yes	69 (95.8)	77 (98.7)	146 (97.3)	
First Contact with mental health services				
Less than 1 month ago	0 (0.0)	1 (1.3)	1 (0.7)	*p* = .633
1 to 5 months ago	3 (4.2)	7 (9.0)	10 (6.7)	
6 to 12 months ago	5 (6.9)	6 (7.7)	11 (7.3)	
13 to 60 months ago	14 (19.4)	17 (21.8)	31 (20.7)	
60+ months ago	50 (69.4)	47 (60.3)	97 (64.7)	
Ever received community mental health care				
No	13 (18.1)	16 (20.5)	29 (19.3)	*p* = .837
Yes	59 (81.9)	62 (79.5)	121 (80.7)	
Ever received mental health care from GP				
No	21 (29.2)	23 (29.5)	44 (29.3)	*p* = 1.000
Yes	51 (70.8)	55 (70.5)	106 (70.7)	
Ever received mental health care in prison (n=125)				
No	13 (21.7)	17 (26.2)	30 (24.0)	*p* = .676
Yes	47 (78.3)	48 (73.8)	95 (76.0)	
Receiving mental health care on entry to custody				
No	39 (54.2)	29 (37.2)	68 (45.3)	***p* = .049**
Yes	33 (45.8)	49 (62.8)	82 (54.7)	
Receiving mental health care from GP on entry to custody				
No	51 (70.8)	51 (65.4)	102 (68.0)	*p* = .489
Yes	21 (29.2)	27 (34.6)	48 (32.0)	
Receiving drug treatment on entry to custody				
No	59 (81.9)	68 (87.2)	127 (84.7)	*p* = .497
Yes	12 (18.1)	10 (12.8)	23 (15.3)	
Receiving alcohol treatment on entry to custody				
No	67 (98.5)	70 (95.9)	137 (97.2)	*p* = .621
Yes	1 (1.5)	3 (4.1)	4 (2.8)	
Receiving psychological therapy in prison				
No	67 (93.1)	71 (91.0)	138 (92.0)	*p* = .767
Yes	5 (6.9)	7 (9.0)	12 (8.0)	

Differences between CTI and TAU Groups at Baseline

Baseline differences between groups were assessed and no differences were found on the majority of variables. This can be seen in each of the tables described above. There was a

significant difference between the groups on whether participants were receiving mental health care on entry to custody (p = .049) and self-reported need for help with drugs (p = .053) and living circumstances (p = .061) had p values around p = .05. Given that 27 variables were analysed for differences at baseline, it would be expected that some are significant by chance and the significance level of this variable may suggest this is the case. These three variables were tested as confounders in the primary outcomes and no effect on significance was found and these variables were included in all logistic regression models.

8.1.3. Staff Characteristics and Fidelity to Intervention

Five CTI managers worked with prisoners throughout the course of the project. Three were psychiatric nurses and had either a diploma or BSc, one was a psychiatrist and one was a clinical psychologist who had received a Doctorate in Clinical Psychology, as well as a PhD. All of the CTI managers had over five years' experience of working in the criminal justice system and four had over five years' experience working with people with severe mental illness with the other CTI manager having worked with this group for between two and five years.

Fidelity ratings were assessed by the researchers in conjunction with the CTI managers at eight time points during the project (Section 7.1.6.). Ratings for each domain were given with a rating of one indicating not implemented, two indicating poorly implemented, three indicating fairly implemented, four indicating well implemented, and five indicating ideally implemented. The average ratings for all time points and CTI managers and the range of ratings are reported in Table 10. The total average fidelity for all of the CTI managers across the study period was 4.04 indicating that the CTI was well implemented.

Table 10. Ratings of Fidelity to Intervention

Fidelity Items	Average Rating (Range)
Components	
Engagement and Early Linking	2.87 (1-4)
Intensive Outreach	3.12 (1-5)
Care Plan	3.5 (1-5)
Focused Work	5.00 (5)
Monitoring	3.87 (1-5)
Cases Closed at Six Weeks	4.00 (1-5)
Six Weeks of Post-release Contact	3.62 (1-5)
Structure	
Caseload Size	5.00 (5)
Quality	
Intake Assessment	5.00 (5)
Phase Planning	4.87 (4-5)
Cases Closed	2.87 (1-5)
CTI Managers Role with Client	4.12 (2-5)
Clinical Supervision	4.00 (1-5)
Organisational Support	4.75 (4-5)
Total Fidelity Score	4.04 (3-4)

8.1.4. Primary Outcomes

Primary Outcome Variables at Six Weeks after Release

Contact with Community Mental Health Professionals at Six Weeks after Release

The number of participants who had any contact with health professionals at six weeks after release and the difference between CTI and TAU groups is presented in Table 11. At six week follow up, 74.5% of the CTI participants had had a contact with any mental health professional compared to 53.3% in the TAU group. This difference was significant (p = .021). Where a Bonferroni correction is applied to account for three primary outcomes and the significance level is reduced (α = .017), the outcome at six weeks is no longer significant.

Having an Allocated Care Co-ordinator After Release at Six Weeks after Release

The number of participants who had an allocated care co-ordinator at six weeks after release and the difference between CTI and TAU groups is presented in Table 11. At six week follow up, 56.4% of the CTI group were allocated a care co-ordinator compared to 28.3% in the TAU group. This difference is significant (p = .003). Where the reduction in alpha according to Bonferroni corrections is applied (α = *0*.017), the difference at six weeks remains significant.

Contact with an Allocated Care Co-ordinator after Release at Six Weeks after Release

The number of participants who had contact with an allocated care co-ordinator at each time point and the difference between CTI and TAU groups is presented in Table 11. At six week follow up, 49.1% of the CTI group had had contact with an allocated care co-ordinator compared to 21.3% in the TAU group and this difference was significant (p = .002). The difference at six weeks remains significant with the Bonferroni correction applied (α = *0*.017).

Table 11. Contact with Any Mental Health Professional, Having an Allocated Care Co-ordinator and Contact with Care Co-ordinator at Six Weeks after Release

		CTI n (%)	TAU n (%)	Total n (%)	p value
Contact with Any Mental Health Professional					
6 week	No	14 (25.5)	28 (46.7)	42 (36.5)	***p* = .021**
(n =115) [a]	Yes	41 (74.5)	32 (53.3)	73 (63.5)	
Allocated Care Co-ordinator					
6 week	No	24 (43.6)	43 (71.7)	67 (58.3)	***p* = .003**
(n = 115)[b]	Yes	31 (56.4)	17 (28.3)	48 (41.7)	
Contact with Allocated Care Co-ordinator					
6 week	No	28 (50.9)	47 (78.3)	75 (65.2)	***p* = .002**
(n = 115)[c]	Yes	27 (49.1)	13 (21.3)	40 (34.5)	

[a]1 case was excluded due to missing data; b1 case was excluded due to missing data; c1 case was excluded due to missing data

Predictors of Outcomes at Six Weeks after Release

Predictors of Contact with Any Mental Health Professionals at Six Week Follow Up

A logistic regression analysis was used to examine predictors of contact with any mental health professional at six week follow up (Table 12). Treatment allocation remained significant (p = .048) when included in a model with other predictors, including being in contact at entry into prison which was the only variable with a significant difference at baseline. Participants in the CTI arm had 2.39 (95% CI 1.01 - 5.69) greater odds of being in contact compared to those in the TAU arm. Legal status was significantly associated with contact (p = .021) and convicted prisoners were more likely to make contact after release (OR = 3.00, 95% CI 1.18 - 7.67). Age, having ever had community mental health intervention and being in contact with either mental health services or GP for reasons related to mental health on entry were not significantly associated with contact but were retained in the model. The final model was significant compared to a constant only model (p = .011) and Cox and Snell and Nagelkerke's pseudo r^2 were .135 and .184 respectively indicating a satisfactory goodness of fit.

Table 12. Logistic Regression Analysis of Contact with any Mental Health Professionals at Six Week Follow Up

6W Contact with Any Professional	Unadjusted Odds Ratio	Unadjusted 95% CI	Adjusted Odds Ratio	Adjusted 95% CI	Adjusted p value
Treatment Allocation					
TAU	Reference				
CTI	2.56*	1.16 - 5.65	2.39	1.01 - 5.69	0.048
Age	1.01	0.97 - 1.06	1.01	0.96 - 1.05	0.889
Legal Status					
Remand	Reference				
Convicted	2.87*	1.23 - 6.69	3.00	1.18 - 7.67	0.021
Any community mental health intervention					
No	Reference				
Yes	2.03^	0.82 - 5.06	2.68	0.79 - 9.09	0.114
In contact with mental health services on entry					
No	Reference				
Yes	1.35	0.63 - 2.90	1.21	0.42 - 3.45	0.727
Receiving mental health care from GP on entry					
No	Reference				
Yes	0.57^	0.25 - 1.289	0.49	0.20 - 1.21	0.120

* indicates p value of less than 0.05 in bivariate analyses; ^ indicates p value of less than 0.20 in bivariate analyses

Predictors of Having an Allocated Care Co-ordinator at Six Week Follow Up

A logistic regression analysis was used to examine predictors of having an allocated care co-ordinator at six week follow up (Table 13). Treatment allocated was significantly associated with having an allocated care co-ordinator at six weeks (p = .004) with participants in the CTI arm having better outcomes (OR = 3.71, 95% CI 1.51 - 9.12). Participants who screened positive as having problematic drug use on the DAST were significantly more likely to have an allocated care co-ordinator (p = .033; OR = 2.68, 95% CI 1.08 - 6.60). Receiving mental health care from a GP on entry was found to have a significant association (p = 0.017) with those in contact being less likely to have an allocated care co-ordinator at this follow up time point (OR = 0.30, 95% CI 0.11 - 0.81). Other variables showed no significant association. The final model was significant compared to a constant only model (p < .001) and Cox and Snell and Nagelkerke's pseudo r^2 were .219 and .295 respectively indicating a highly satisfactory goodness of fit.

Table 13. Logistic Regression Analysis of Allocated Care Co-ordinator at Six Week Follow Up

6W Allocated Care Co-ordinator	Unadjusted Odds Ratio	Unadjusted 95% CI	Adjusted Odds Ratio	Adjusted 95% CI	Adjusted p value
Treatment Allocation					
TAU	Reference				
CTI	3.27*	1.51 - 7.09	3.71	1.51 - 9.12	0.004
Age	1.04^	1.00 - 1.08	1.03	0.99 - 1.08	0.131
Legal Status					
Remand	Reference				
Convicted	2.61*	1.05 - 6.50	1.88	0.66 - 5.33	0.237
Any community mental health intervention					
No	Reference				
Yes	2.15	0.82 - 5.66	1.80	0.49 - 6.59	0.374
In contact with mental health services on entry					
No	Reference				
Yes	1.57	0.74 - 3.33	1.70	0.59 - 4.89	0.325
Receiving mental health care from GP on entry					
No	Reference				
Yes	0.41*	0.18 - 0.97	0.30	0.11- 0.81	0.017
Above cut-off for problem drug use					
No	Reference				
Yes	2.48*	1.14 - 5.40	2.68	1.08 - 6.60	0.033

* indicates p value of less than 0.05 in bivariate analyses; ^ indicates p value of less than 0.20 in bivariate analyses

Predictors of Contact with an Allocated Care Co-ordinator at Six Week Follow Up

A logistic regression model was used to examine predictors of contact with a care co-ordinator at six week follow up (Table 14). Participants in the CTI arm had 4.09 greater odds of contact with a care co-ordinator at six weeks (p = 0.003, OR = 4.09, 95% CI 1.59 - 10.50). Age was significantly associated with contact with a care co-ordinator (p = .007) and the odds ratio indicates that an increase in age was linked to a higher likelihood (OR = 1.06, 95% CI 1.02 - 1.12). Legal status was associated with the outcome with convicted prisoners more likely to have care co-ordinator contact (p = 0.049, OR = 3.23, 95% CI 1.00 - 10.43). Patients who were receiving mental health care from their GP at entry were significantly less likely to have made contact with an allocated care co-ordinator at six week (p = .005, OR = 0.21, 95% CI 0.07 - 0.63). Having ever had contact with community mental health services or being on contact with mental health services on entry were not significantly associated with this outcome. The final model was significant compared to a constant only model (p < .001) and Cox and Snell

and Nagelkerke's pseudo r^2 were 0.226 and 0.252 respectively indicating a highly satisfactory goodness of fit.

Table 14. Logistic Regression Analysis of Contact with Allocated Care Co-ordinator at Six Week Follow Up

6W Contact with Allocated Care Co-ordinator	Unadjusted Odds Ratio	Unadjusted 95% CI	Adjusted Odds Ratio	Adjusted 95% CI	Adjusted p value
Treatment Allocation					
TAU	Reference				
CTI	3.56*	1.58 - 8.00	4.09	1.59 - 10.50	0.003
Age	1.06*	1.02 - 1.11	1.07	1.02 - 1.12	0.007
Legal Status					
Remand	Reference				
Convicted	3.64*	1.27 - 10.40	3.23	1.00 - 10.43	0.049
Any community mental health intervention					
No	Reference				
Yes	1.46	0.55 - 3.87	1.27	0.33 - 4.92	0.733
In contact with mental health services on entry					
No	Reference				
Yes	1.22	0.56 - 2.63	1.74	0.58 - 5.23	0.328
Receiving mental health care from GP on entry					
No	Reference				
Yes	0.27*	0.10 - 0.72	0.21	0.07 - 0.63	0.005

* indicates p value of less than 0.05 in bivariate analyses; ^ indicates p value of less than 0.20 in bivariate analyses

Primary Outcome Variables at Six and 12 Month Follow Up

Contact with Community Mental Health Professionals at Six and 12 Month after Release

The number of participants who had any contact with health professionals at each time point after release and the difference between CTI and TAU groups is presented in Table 15 and graphically in Figure 4. At six month follow up, 73.9% of CTI participants had had a contact with a mental health professional compared to 78.0% for the TAU group. At 12 month follow up, 76.9% of CTI participants had had a contact compared to 65.9% of the TAU group. The differences at six and 12 months were not statistically significant.

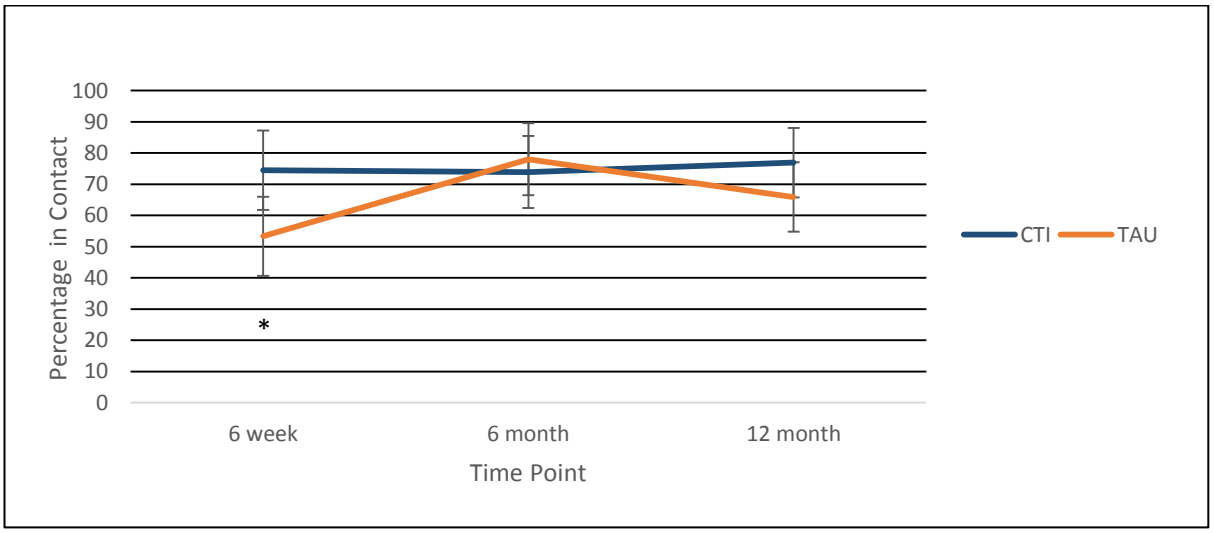
Table 15. Contact with Any Mental Health Professional at Each Time Point and Difference Between CTI and TAU Groups

		CTI n (%)	TAU n (%)	Total n (%)	p value
Contact with Any Mental Health Professional					
6 week	No	14 (25.5)	28 (46.7)	42 (36.5)	***p* = .021**
(n =115) [a]	Yes	41 (74.5)	32 (53.3)	73 (63.5)	
6 month	No	12 (26.1)	11 (22.0)	23 (24.0)	*p* = .811
(n = 96) [b]	Yes	34 (73.9)	39 (78.0)	73 (76.0)	

12 month (n = 81)[c]	No	9 (23.1)	14 (34.1)	23 (28.8)	*p* = .597
	Yes	30 (76.9)	27 (65.9)	57 (71.2)	

[a]1 case was excluded due to missing data; [b]2 cases were excluded due to missing data; [c]4 cases were excluded due to missing data

Figure 4. Contact with Any Mental Health Professional at Each Time Point and Difference between CTI and TAU Groups



* indicates significant (unadjusted for Bonferroni correction); error bars illustrate 95% CI

Allocation of Care Co-ordinator at Six and 12 Month after Release

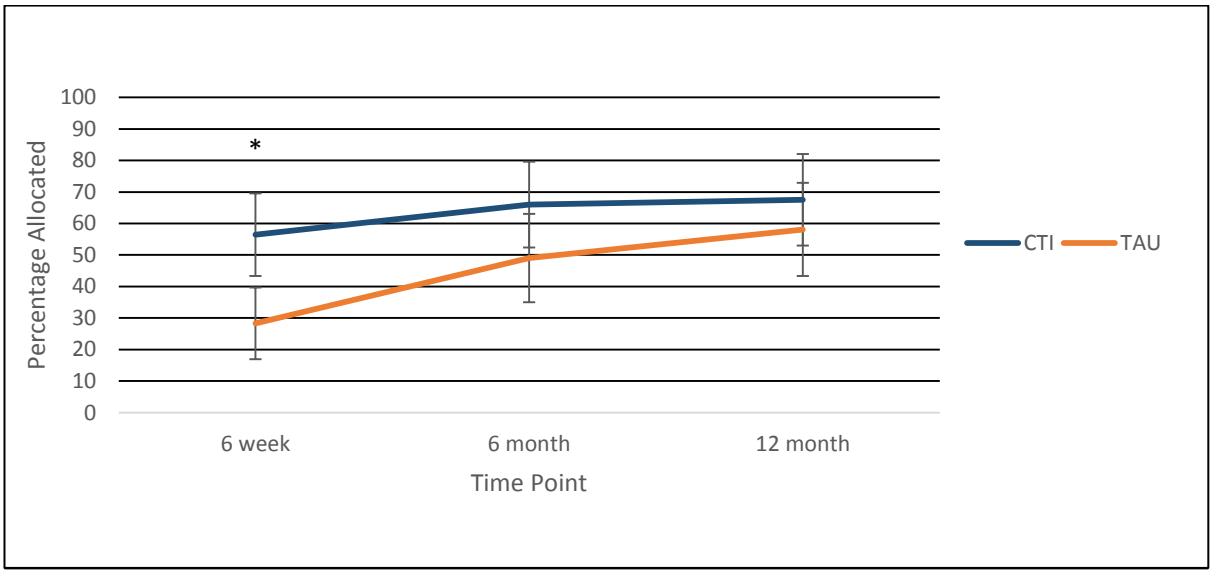
The number of participants who had an allocated care co-ordinator at each time point after release and the difference between CTI and TAU groups is presented in Table 16 and graphically in Figure 5. At six month follow up, 66.0% of the CTI group were allocated a care co-ordinator compared to 49.0% in the TAU group and at 12 months follow up, 67.5% of the CTI had a care co-ordinator compared to 58.1% in the TAU group. Neither of the differences at these later time points were significant.

Table 16. Allocated Care Co-ordinator at Each Time Point and Difference between CTI and TAU Groups

		CTI n (%)	TAU n (%)	Total n (%)	p value
Allocated Care Co-ordinator					
6 week (n = 115)[a]	No	24 (43.6)	43 (71.7)	67 (58.3)	***p* = .003**
	Yes	31 (56.4)	17 (28.3)	48 (41.7)	
6 month (n = 96)[b]	No	16 (34.0)	25 (51.0)	41 (42.7)	*p* = .103
	Yes	31 (66.0)	24 (49.0)	55 (57.3)	
12 month (n = 84)[c]	No	13 (32.5)	18 (41.9)	31 (37.3)	*p* = .496
	Yes	27 (67.5)	25 (58.1)	52 (62.7)	

[a]1 case was excluded due to missing data; [b]2 cases were excluded due to missing data; [c]1 case was excluded due to missing data

Figure 5. Allocated Care Co-ordinator at Each Time Point and Difference between CTI and TAU Groups



* indicates significant (unadjusted for Bonferroni correction); error bars illustrate 95% CI

Contact with Care Co-ordinator at Six and 12 Months after Release

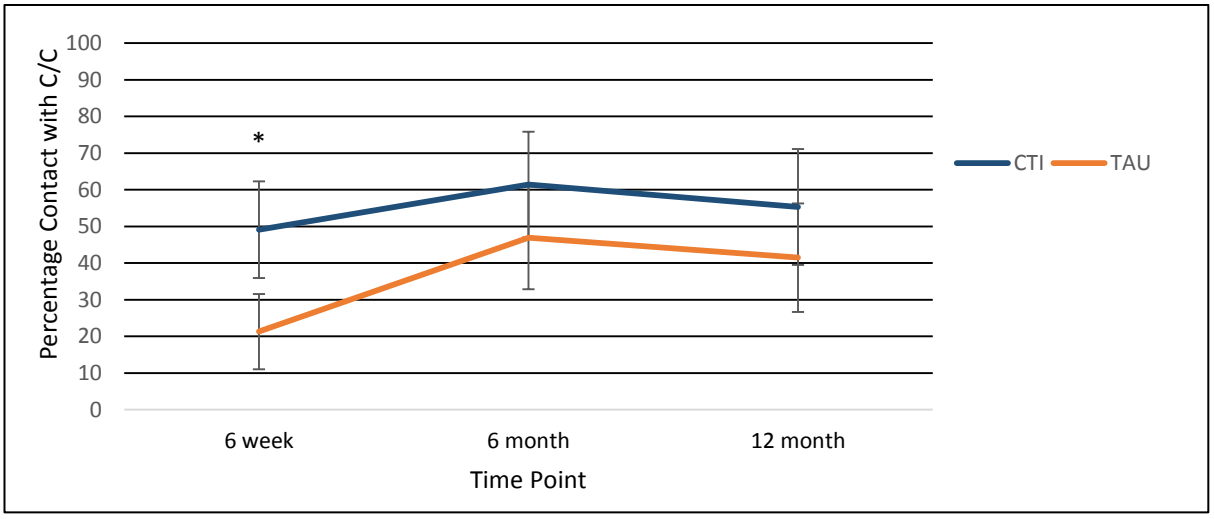
The number of participants who had contact with an allocated care co-ordinator at each time point and the difference between CTI and TAU groups is presented in Table 17. and graphically in Figure 6. At six month follow up 61.4% of the CTI group and 46.9% in the TAU group had had contact with a care co-ordinator and at 12 months this was 55.3% and 41.5% respectively. These differences at six and 12 month follow up were not significant.

Table 17. Contact with Allocated Care Co-ordinator at Each Time Point and Difference between CTI and TAU Groups

		CTI n (%)	TAU n (%)	Total n (%)	p value
Contact with Allocated Care Co-ordinator					
6 week	No	28 (50.9)	47 (78.3)	75 (65.2)	***p* = .002**
(n = 115)[a]	Yes	27 (49.1)	13 (21.3)	40 (34.5)	
6 month	No	17 (38.6)	26 (53.1)	43 (46.2)	*p* = .212
(n = 93)[b]	Yes	27 (61.4)	23 (46.9)	50 (53.8)	
12 month	No	17 (44.7)	24 (58.5)	41 (51.9)	*p* = .264
(n = 79)[c]	Yes	21 (55.3)	17 (41.5)	38 (48.1)	

[a]1 cases was excluded due to missing data; [b]5 cases were excluded due to missing data; [c]6 cases were excluded due to missing data

Figure 6. Contact with Allocated Care Co-ordinator at Each Time Point and Difference between CTI and TAU Groups



* indicates significant (unadjusted for Bonferroni correction); error bars illustrate 95% CI

Whilst the difference in having an allocated care co-ordinator between the CTI and TAU groups was significant at only the six week follow up, the CTI group had a higher proportion of participants with a care co-ordinator at each follow up. The sample recruited into the study was lower than anticipated and as a result the numbers available at each follow up were lower than projected by the *a priori* power calculations. Post hoc power calculations suggest that the power to detect a difference for this outcome drop from 87.2% at six weeks, to 38.9% at six months and 13.9% at 12 months. The results should be interpreted in this context. Similarly, there are a higher proportion of CTI participants who have had contact with their care co-ordinator at each of the time points and due to drop out and missing data the power reduces at each stage from 89.0% at six week to 28.6% at six months and 23% at 12 months and this is worth considering.

8.1.5. Secondary Outcomes

Outcomes in Other Health and Forensic Variables at Each Time Point after Release

Nine other outcomes of interest were analysed and significant results are presented below (Table 18). Other secondary outcomes can be found in Appendix V. At six week follow up, compared to TAU, the CTI group had a significantly higher number of participants with a care

plan in place (p = .004), registered with a GP (p = .010) and prescribed medication (p = .033). The CTI group also had a significantly higher number of participants return to prison (p = .015). None of these differences remained significant at six or 12 months follow up. No significant differences were found at any time point on variables related to having a CPA meeting organised, nights homeless, employment, contact with family and compliance with prescribed medication. Missing data was more prevalent in the secondary compared to primary outcomes and ranged from n = 1 to n = 23 for return to prison within six weeks.

Table 18. Secondary Outcomes

		CTI n (%)	TAU n (%)	Total n (%)	p value
Care Plan in Place					
6 week	No	25 (45.5)	44 (73.3)	69 (60.0)	***p* = .004**
(n = 115)[a]	Yes	30 (54.4)	16 (26.7)	46 (40.0)	
6 month	No	16 (35.6)	27 (54.0)	43 (45.3)	p = .099
(n = 97)[b]	Yes	29 (64.4)	23 (46.0)	52 (54.7)	
12 month	No	19 (50.0)	21 (50.0)	40 (50.0)	p = 1.000
(n = 81)[c]	Yes	19 (50.0)	21 (50.0)	40(50.0)	
Registered with GP					
6 week	No	5 (10.2)	18 (31.0)	23 (21.5)	***p* = .010**
(n = 107)[d]	Yes	44 (89.8)	40 (69.0)	84 (78.5)	
6 month	No	2 (4.9)	7 (14.9)	9 (10.2)	p = .166
(n = 88)[e]	Yes	39 (95.1)	40 (85.1)	79 (89.8)	
12 month	No	0 (0.0)	2 (6.3)	2 (3.1)	p = .238
(n = 66)[f]	Yes	33 (100.0)	30 (93.8)	63 (69.9)	
Prescribed Medication					
6 week	No	4 (8.2)	13 (25.0)	17 (16.8)	***p* = .033**
(n = 101)[g]	Yes	45 (91.8)	39 (75.0)	84 (83.2)	
6 month	No	2 (5.3)	7 (15.9)	9 (11.0)	p = .166
(n = 82)[h]	Yes	36 (94.7)	37 (84.1)	73 (89.0)	
12 month	No	1 (2.9)	1 (3.6)	2 (3.2)	p = 1.000
(n = 63)[i]	Yes	33 (97.1)	27 (96.4)	60 (96.8)	
Returned to Prison					
6 week	No	37 (77.1)	44 (95.7)	81 (86.2)	***p* = .015**
(n = 93)[j]	Yes	11 (22.9)	2 (4.3)	13 (13.8)	
6 month	No	22 (55.0)	29 (74.4)	51 (64.6)	p = .100
(n = 79)[k]	Yes	18 (45.0)	10 (25.6)	28 (35.4)	
12 month	No	15 (44.1)	17 (60.7)	32 (51.6)	p = .213
(n = 63)[l]	Yes	19 (55.9)	11 (39.3)	30 (48.4)	

[a]1 case was excluded due to missing data; [b]1 case was excluded due to missing data; [c]4 cases were excluded due to missing data; [d]9 cases were excluded due to missing data; [e]10 cases were excluded due to missing data; [f]19 cases were excluded due to missing data; [g]15 cases were excluded due to missing data; [h]16 cases were excluded due to missing data; [i]22 cases were excluded due to missing data; [j]23 cases were excluded due to missing data; [k]19 cases were excluded due to missing data; [l]22 cases were excluded due to missing data

8.2. Qualitative Results

8.2.1. Characteristics of Prisoners in the Qualitative Sample

Fourteen participants were recruited from seven of the eight prison sites. Eight of the participants had been randomised to the CTI group and six to the TAU group. Ten of the participants completed interviews before release only, and four completed interviews both before and after release. The timing of pre-release interviews ranged from four days to a month before release and post-release interviews were completed between five and seven weeks after release. A lower than expected number of prisoners (Section 7.3.1.) were recruited and few participants were available for post-release interviews. Due to this the sample were analysed as a whole and not separated according to the intended purposive groups. A comparison was also not made between perceptions and experiences pre and post-release. The implications of this for saturation are commented on in the discussion (Section 9.6.1.)

Basic information on patients in the qualitative sample is presented in Table 19. For identification of quotes, patients will be abbreviated as "P" throughout with treatment group and whether it was from the pre or post-release interview (e.g. P1, TAU, Pre-release).

Table 19. Basic Information for Patients in the Qualitative Sample

ID	Prison	Treatment Group	Stage of Interview
Patient 1	B	TAU	Pre-release
Patient 2	A	CTI	Pre and Post-release
Patient 3	C	CTI	Pre and Post-release
Patient 4	C	CTI	Pre-release
Patient 5	C	CTI	Pre-release
Patient 6	F	TAU	Pre-release
Patient 7	F	CTI	Pre-release
Patient 8	E	CTI	Pre-release
Patient 9	G	CTI	Pre and Post-release
Patient 10	G	TAU	Pre-release
Patient 11	H	TAU	Pre and Post-release
Patient 12	H	TAU	Pre-release
Patient 13	H	TAU	Pre-release
Patient 14	H	CTI	Pre-release

Basic demographic, clinical and forensic information on the qualitative sample is presented in Table 20. The mean age of participants in the qualitative sample was 35 with a range of 20 and 49. Eight were of white ethnicity, three of black ethnicity and two of mixed ethnicity. One

participant declined to answer this item. According to the OPCRIT, ten of the participants in the qualitative sample had schizophrenia, one had schizo-affective disorder and three had bipolar affective disorder. Ten out of 14 of the sample had a personality disorder, with antisocial personality disorder the most common, and all but one had had contact with community mental health services. Ten out of 14 were convicted and the number of previous times in prison ranged from none to 35.

Table 20. Basic Demographic, Clinical and Forensic Information on Qualitative Sample

	n (%)
Age[a]	35.00 (8.73)
Ethnicity	
White	8 (57.1)
Black	3 (21.4)
Mixed	2 (14.3)
Prefer not to answer	1 (7.1)
Diagnosis	
Schizophrenia	10 (71.4)
Schizoaffective Disorder	1 (7.1)
Bipolar Disorder	3 (21.4)
Personality Disorder	
No	4 (28.6)
Yes	10 (71.4)
Any Previous Contact with Community Mental Health Services	
No	1 (7.1)
Yes	13 (92.9)
Legal Status	
Remand	4 (28.6)
Sentenced	10 (71.4)
Previous Times in Prison	
None	2 (14.3)
1 to 3	3 (21.4)
4 to 7	4 (28.6)
8+	4 (28.6)
Not known	1 (7.1)

[a] Mean and Standard Deviation reported

8.2.2. Themes from Prisoners Interviews

When prisoner interviews were analysed on their own the following themes were identified: Needs and concerns on release, perceived benefits and problems of the CTI and dilemmas and challenges in the transition from prison to the community (Figure 7.).

Needs and Concerns on Release

During the interviews when asked about issues that they would need help with on release, participants talked about a number of needs and concerns. Prompts related to housing, mental health, drug and alcohol use and finances were given and these were also often the issues raised spontaneously without this being required.

Housing

All of the participants mentioned housing as a need and few indicated that they had stable housing to return to after release. This was a salient concern across the interviews because of the uncertainty and instability associated with it, and the impact it would have on other aspects of life after release, including financially, for their social support networks, or in relation to access to health and social services.

> *I was a bit worried about that, where I'm going to be living. (P14, CTI, Pre-release)*
>
> *Housing so I don't end up homeless or in a shelter. (P12, TAU, Pre-release)*
>
> *The most important there of them you mentioned is getting back into a hostel because I won't be able to go back to the one I've just left. (P10, TAU, Pre-release)*
>
> *I need somewhere to live. I don't need anyone to tell me that. And the only place I can go is a hostel. (P13, TAU, Pre-release)*

All of the participants were coming up to release and even for participants who were set to be released in less than a week, there was great deal of uncertainty about where they would be housed and whether arrangements had already been put in place.

> *I don't know where or when. (P3, CTI, Pre-release)*
>
> *They're getting me a hostel or something. But I don't know. (P4, CTI, Pre-release)*

One participant indicated that in the past, he had no housing arranged on release so had to go to council offices on the first day to try and arrange this.

> *I won't get told where I'm going until next week. And that's if I'm lucky. I've left here before and been told to go down to the council and sit and wait. (P12, TAU, Pre-release)*

Two of the participants did have housing arranged on release but this had not been organised or facilitated by the prison services. In one case this was due to a partner maintaining a flat that could be returned to after release and in the other, the time spent in prison on remand was short enough that social housing could be retained.

> *I've got a flat with my partner down Croydon. She's kept that on so that's easy. (P7, CTI, Pre-release)*

> *I've got my own flat outside and I'll be going back there as soon as I get released. I'm not one of these people who needs everything done for them. I can sort it myself. (P6, TAU, Pre-release)*

Participants raised the importance of housing as a basic need and one participant highlighted how key stable housing was in making and maintaining contact with other services. Some made clear links between lack of housing and a return to prison and were aware that homelessness was a possibility after release.

> *I've done this so many times and if you don't have a hostel then that's it you'll be back in a week. That's why I keep coming back, you don't get somewhere to live, you don't have any chance. (P13, TAU, Pre-release)*

> *You leave and you need somewhere to sleep that first night out don't you. And then that gives you a base to plan everything. You can't be homeless and getting benefits and getting letters from people and your probation knowing how to see you. If you haven't got that then you've got no hope. (P10, TAU, Pre-release)*

Where housing was available, there were concerns about the environment and culture of placements with particular concern about hostels.

> *Like in the hostel, if you have someone who's got symptoms it makes you worse and I don't want to be around that. (P9, CTI, Pre-release)*

Health

Concerns around mental health were also evident across the interviews. The majority of the participants were open about their mental health problems and indicated that they wanted some form of help from mental health services.

> *Yeh getting medication for when I leave and then being able to see someone regularly so that I can keep that up would be helpful. I know now it helps to keep me on a level and I don't want to have that manic phase again where I'm not thinking straight and doing stupid stuff. (P14, CTI, Pre-release)*

> *Yeh I need help with all that. Because I've been in and out of here and in and out of hospital. I've been on all the teams, I had a CMHT and then after hospital once they said I needed that home treatment team. So they all know me and know I need to keep getting treatment. (P10, TAU, Pre-release)*

> *I have big problems with mental health. For a few years I've been well depressed and stuff but the last few months I've been getting voices as well and that's why I'm on the inreach team, that's why they come and see me. (P11, TAU, Pre-release)*

Two of the participants were either ambivalent about support or rejected the idea that they had mental health problems and required help. In one case, it was clearly stated that concerns about mental health were secondary to other needs.

> *I don't need any help with that [mental health problems]. (P6, TAU, Pre-release)*

> *[In response to "Do you think you need help with problems related to mental health?"] No, I already told you, it's housing that's the problem isn't it. I'll sort everything else out when I go. (P4, CTI, Pre-release)*

The latter of these had first made contact with mental health services on his current period in custody and indicated that he had previously managed problems on his own.

> *It's the 1st time I've ever had a mental health team on the outside. I've always self-medicated. (P4, CTI, Pre-release)*

It is worth noting that several participants remarked that prison had brought a period of stability and sustained treatment for mental health problems and there had been some level of remission. Due to this, there was a sense that mental health treatment was not a priority after release especially with the many other issues to resolve in this period.

I might need some help with that [mental health problems]. But it's not as bad as it has been, I reckon it's probably gone away a bit you know. (P13, TAU, Pre-release)

In addition to the issue of access to mental health services, participants noted the potentially negative effect of release from prison on their mental health and conversely, the effect of having mental health problems on the process of release. Some were concerned that their mental health would deteriorate as a result of the stress surrounding release, whilst others noted that issues to do with paranoia or anxiety would impact their ability to travel or access services.

I'm pretty worried about getting back out and getting stressed again and then what happens then. I get paranoid don't I when I have to be around people I don't know. And that's stopped me doing what I used to do and I just sit in my room and don't do nothing. (P5, CTI, Pre-release)

That was something I was worried about because I get so anxious about being on buses, being with other people in public. Paranoia and anxiety can be quite bad for me. (P9, CTI, Post-release)

Participants also made links between being released and hospitalisation or a return to prison because of their mental health.

You know people end up in hospital, 4 or 5 weeks and they're locked up in the bin [psychiatric unit], or they're back here you know. (P3, CTI, Pre-release)

Lapsing is always a problem and you see people come back all the time. (P9, CTI, Pre-release)

I just don't want to go to a hospital (P13, TAU, Pre-release)

In one case, a participant said that his offence was caused by mental health problems and he was concerned that that this could happen again.

I got these voices and ideas about someone and ended up punching them and got done for assault. (P11, TAU, Pre-release)

Some participants didn't directly link the effect of mental health problems on the process of release but gave an account of the difficulties of living with a mental health problem more generally, and the need for or perceived benefit of additional support.

Being under mental health, having a problem, it's something heavy to be under. Sometimes it's just about getting through the day, some extra help would be good. Like when I saw you last time, we talked about voices and stuff. It gets you down. It's a burden. (P3, CTI, Pre-release)

Few participants mentioned other health needs but one participant mentioned that he would need to see a GP for physical health needs. He also raised the issue of GPs helping coordinate other services or with providing evidence for benefit applications.

> *And I need to see my Dr [GP] on the outside too, He's pretty good. Because he can help with everything you know. Like he might sort me tablets for different things and you need him to help with other things. (P13, TAU, Pre-release)*

Drug and Alcohol Use

Problems related to drug and alcohol use were mentioned by just under half of the participants (n=6). For two of the participants, their main offence was explicitly linked to drug or alcohol use and whilst one fully acknowledged that this was the case and that these problems needed to be addressed, the other was more ambivalent and acknowledged drinking a lot of alcohol but stated that it was usually under control.

> *I don't use drugs no more but you hear people, they get clean and then they leave and boom, that day they're using. (P3, CTI, Pre-release)*

> *Alcohol and drug problems because that's what caused me to be here and I can fit back into my old life but that's one thing I want to sort out. (P14, CTI, Pre-release)*

> *Yeh drinking is my thing. You know what I mean. I like to drink. I'm not an alcoholic but I do like to have a few drinks. I'm not an alcoholic. I don't drink all the time, but sometimes I drink too much and get in trouble. (P3, CTI, Pre-release)*

Finances

Most of the participants indicated that they would be reliant on benefits after release and the time delay between release and the start of payments was a concern, as were changes about eligibility for benefit payments. Families were needed to bridge the gap between release and the availability of benefits and participants were aware that they would struggle without this support.

> *Well benefits obviously, but they don't come in for about 5 or 6 weeks I don't think. That's what I got told anyway. Well it would be a problem [without family support]. What am I going to do if I've got no money? (P3, CTI, Pre-release)*

None of the participants were in employment before entering prison, although one participant suggested that he was receiving money from a regular source but was not willing to discuss this further. Several of the participants stated that they would be unable to find employment due to their history of offending or their mental health problems. One of the participants was in education at the time of entering prison and hoped that he could continue this.

> *I know I need qualifications to go on and do a job. (P5, CTI, Pre-release)*
>
> *There's no chance of anyone employing me is there. (P12, TAU, Pre-release)*

Critical Time Intervention

Perceived Benefits

Participants were positive about the CTI approach and indicated that they thought the approach would be beneficial. This was reflected in statements by CTI participants both before and after release.

> *I think it's good you know. Excellent actually. I've been a bit stressed actually, and that support is good. (P3, CTI, Pre-release)*
>
> *Yeh definitely [it will be helpful]. There's someone there to help you isn't there. I didn't really get any help last time and there wasn't someone like [CTI Manager] who was helping me plan for after I go. So that's been better I think. (P5, CTI, Pre-release)*
>
> *That sounds good because I didn't see no structure. We've just kind of chatted. And that's been helpful. Like talking about plans and stuff. She seems very helpful. A lot of prisoners get let down when they go. No one is helpful and it goes wrong. It might make you have a better future and helps you have that lifestyle which is better. With that bit of help, you might stay out. (P9, CTI, Pre-release)*

The through the gate aspect, with the CTI manager being able to provide support both before and after release, was seen as helpful both among pre-release participants and those who were interviewed in the community.

> *It's good someone else is taking an interest. And like you said maybe she can make sure people outside talk to each other. (P4, CTI, Pre-release)*
>
> *I don't know enough really but it seems like it should be helpful. She's going to work with me after as well which is more when I think I might need that support. (P14, CTI, Pre-release)*

Yeh that sounds much better than what happens usually. Unless you have probation then no one helps you after you've gone. (P7, CTI, Pre-release)

This thing has been pretty good for me and it definitely has helped. [CTI Manager} has helped me a lot and I reckon now I've been out this long I can keep it up. (P9, CTI, Post-release)

Participants in the treatment as usual group were not directly asked about the CTI as it was decided that having been randomised to not receive the intervention, it would not be fair to discuss its merits further but one treatment as usual participant commented on the CTI spontaneously. This participant couldn't see any negatives of the CTI but expressed dissatisfaction at being allocated to the treatment as usual (TAU) group as a result of randomisation. This is a problem that is particular to the randomised design in the study and their frustration at not receiving help suggested that they thought it would be useful.

I'm pretty annoyed I haven't got that help that you said I might get. I know you've explained why it's like that but I'm not sure that's fair. If someone is in need like me then they should get all the help on offer. (P10, TAU, Pre-release)

Perceived Problems

As part of the topic guide, participants were asked whether they could see any negatives to the CTI approach. The majority of the participants indicated that they could not think of negatives of this approach. Even participants who were negative about mental health services in general or expressed concerns about having too much intervention from services were positive about the CTI.

I'll be honest I don't want people interfering too much and I don't let people get hold of me if I don't want to see people. I've got all these people to see so she was helpful but I didn't want to have to plan to see her all the time. (P3, CTI, Post-release)

One participant indicated that he'd like the additional help to go on for longer than the six week period but understood why this could not happen.

Obviously I'd want it to go on for more time. Because that extra help is good. But I think I'll be ok with my other teams really now. (P9, CTI, Post-release)

Another participant suggested that an additional new member of care being introduced at four weeks before release would not be desirable, however, at this study site an existing member of mental health inreach team staff also fulfilled the CTI role and this was avoided.

> *I don't know how well it'd work if someone new came in and I'd never seen them before and you want me to tell them everything about where I live and what I want to do after I get out. (P7, CTI, Pre-release)*

Dilemmas and Challenges

In addition to prisoners' needs and concerns and the perceived benefits and problems of the CTI approach, a number of other dilemmas and challenges emerged that had an effect on this period. Uncertainty surrounding release, stigma, social exclusion and family support were all areas that were not in the topic guide but were raised spontaneously by several participants and are discussed below.

Uncertainty Surrounding Release

Participants talked about the uncertainty surrounding release and not knowing the exact date of release. This was a particular problem for remand prisoners with release from court a possibility but this was unpredictable.

> *That's because of what's going on in court. It could go either way, a good judge and they don't think it's that serious or they'll throw it at you and then that'd be a sentence of at least a good few months. (P7, CTI, Pre-release)*

> *About a month. But I'm going to court next week and it could be then. I don't really know. (P6, TAU, Pre-release)*

> *I'm going to get released in about 3 or 4 weeks I hope. I thought it might be sooner but the court is messing me around a bit. Telling me I'll get out next time but then it gets delayed and then it's next time again. (P14, CTI, Pre-release)*

Participants also raised other issues which led to uncertainty about the date of release including having days added on for disciplinary issues and being released shortly after a parole hearing.

> *Usually you get a pretty good idea but this time I just don't know. We'll see when it comes to it. (P7, CTI, Pre-release)*

> *The parole board gave me the result yesterday, so 15 days. (P9, CTI, Pre-release)*

When discussing the uncertainty around release, most of the participants described their frustration at not knowing how long they had left in prison. However, one participant also highlighted how this uncertainty impacted on the ability of services to then plan for this date. In this case a comparison was made between previous sentences when the participant was sentenced and had a set date of release.

> *Sometimes I don't think they've realised you've gone. If you go from court not from prison sometimes you talk to the treatment team and no one has told them you're out…That not knowing when I'm going stops it all I think. I've gone back out on a long sentence before and that's easier because from day 1 everyone knows exactly when you'll go. (P10, TAU, Pre-release)*

Stigma and Social Exclusion

Several of the participants raised issues related to stigma and social exclusion in the interviews and indicated that it had an effect on housing and employment after release. This was related to having a history of offending, having spent time in prison and having mental health problems. Participants often had extensive experience of all of these issues and it often wasn't clear which they were referring too.

> *They'd find out [an employer] I've been in prison and that's it. Not even a chance. (P12, TAU, Pre-release)*

> *A job isn't an option with me being like I am and the history I've got. (P10, TAU, Pre-release)*

> *Almost 10 years in prison. I don't have any chance of a job do I. (P9, CTI, Post-release)*

One participant said he had expected to have problems with employment due to his time in prison but had found that several job applications had not asked about this. He thought he may be able to pass time in prison off as a period of unemployment for other reasons.

> *Those ones haven't even asked whether I've been in prison so I think that might not matter. (P11, TAU, Post-release)*

Participants also mentioned their negative beliefs about mental health services and what mental health care would be like and this was a barrier to seeking help. In some cases, the experience of accessing care in prison had been positive and helped dispel some of these beliefs.

My idea of mental health and shrinks was that they'd put you in a straitjacket in a hospital and that would be it. (P4, CTI, Pre-release)

But the team here has been good [in prison]. I've been surprised by that. (P3, CTI, Pre-release)

Family Support

A number of the participants mentioned relationships with their families. Some had positive and supportive relationships with their family, whilst others reported a more negative situation.

My mum and dad live in Lambeth and they know what I'm like. They've seen it all before. And yeh my partner isn't too happy with me here but that'll smooth out when I'm out. (P7, CTI, Pre-release)

They're useless anyway. They just go on and on at me and I'm fed up of them. (P12, TAU, Pre-release)

Participants described being aware that family relationships could be strained and knew of cases where relationships had broken down. In some cases, this was related to the separation from family they experienced being in prison, including the impact of difficulties surrounding visiting.

I don't like them visiting here. I don't like them seeing me like this. But mainly I guess, I don't like seeing them leave. (P3, CTI, Pre-release)

They also pointed to the impact that having been in prison or having mental health problems could have on their family relationships, which was linked to the social exclusion or stigma described above.

Most people in here have family there for them. It's if you've done something real bad or if you do something against them, that's when they're going to not be there. (P5, CTI, Pre-release)

My parents try to keep an eye on me when I'm out but they don't understand it so having someone that gets it helps. This whole mental thing is affecting that because they're getting stressed with it as well and it's not good for our relationship. So I say it's fine but I don't want it to get to the stage where they're kicking me out which you do see happen and then where do you go. (P11, TAU, Pre-release)

Ex con. They aren't going to like me are they [referring to contact arrangements with son]. (P9, CTI, Post-release)

Many of the participants who spoke about family indicated that they took responsibility for providing support in a range of issues. This included housing (which sometimes led to impractical and unsustainable living arrangements), financial support, and helping with mental health problems including acting as formal or informal carers.

> *I was staying at my parents first up and so I'll go back there and they've got space for me. (P11, TAU, Pre-release)*

> *So I expect my family will give me a bit [of money] here and there. Someone will top that up for me [Oyster], my mum or brother. (P3, CTI, Pre-release)*

> *And this is bad but I'll have to rely on my Mum won't I [for money]. Because it takes a bit for benefits to come in. (P5, CTI, Pre-release)*

> *My sister and brother in law. They're my main support, basically they're my carers, they help me. (P9, CTI, Pre-release)*

Return to Everyday Life in the Community and the End of Imprisonment

Participants in the qualitative sample also gave a rich description of what returning to everyday life in the community is like and this is an area that is often overlooked in both health and prison research. A range of social activities and interests were mentioned including a return to family life, the enjoyment of food outside of the prison diet, and for some drinking alcohol after a long period of enforced abstinence.

> *I'll go see my brother and sister. Have a little drink, nothing heavy though. Just a year in here you know, you need a drink. Then something decent to eat, my Mum's food. Good cook. I've lost a stone in here. But she's a good cook, pie and mash, roast. You know real food. (P3, CTI, Pre-release)*

Some of the participants reflected on the prison experience and acknowledged that life in both prison and the community was difficult. For many, there was a sense of relief at having ended the period of imprisonment.

> *It's been a hard year, it has it's been hard, but I've done it. (P3, CTI, Pre-release)*

> *Two weeks until I go. It can't go quick enough so I can get away from here. (P12, TAU, Pre-release).*

However, for some this was tempered by awareness of the problems that returning to the community would bring. Participants mentioned both personal challenges, as well as the ways in which they felt the structure failed them.

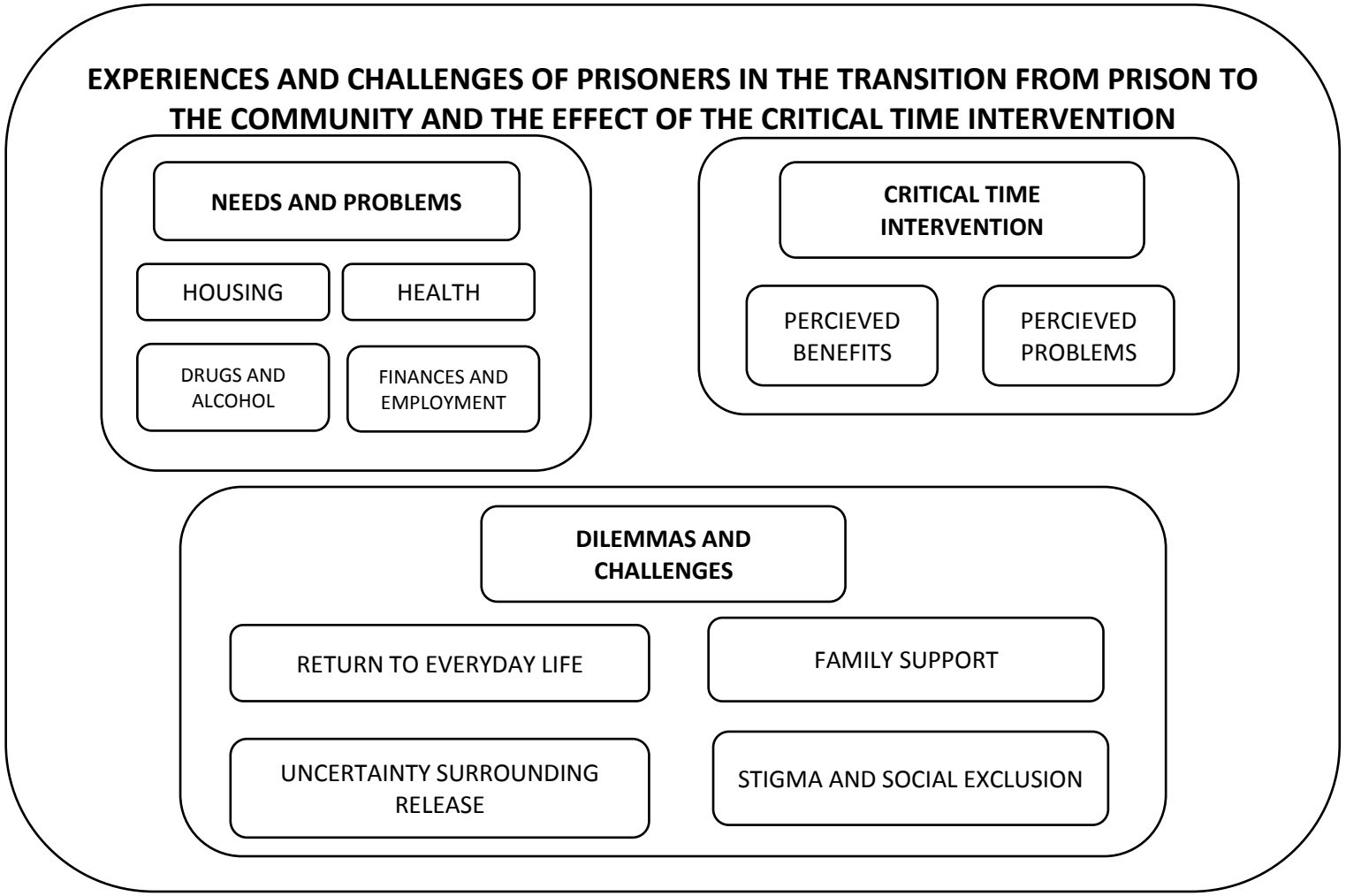
> *I've been out so many times and always come back. It's my fault sometimes but sometimes it's just too hard outside. (P13, TAU, Pre-release)*

> *It's just prison isn't it. That's how it works. You sit in here for months and then you go and you have to get back to everything yourself. They aren't interested in helping once you're gone. (P12, TAU, Pre-release)*

> *A lot of prisoners get let down when they go. No one is helpful and it goes wrong. (P9, CTI, Pre-release)*

> *I've been in and out so many times and nothing ever works. (P10, TAU, Pre-release)*

Figure 7. Experiences and Challenges of Prisoners in the Transition from Prison to the Community and the Effect of the Critical Time Intervention



8.2.3. Characteristics of Staff in the Qualitative Sample

Eight members of staff were recruited for the qualitative study with seven of these currently working in prison and one currently working in the community. All of the participants had experience of working in both prison and the community. During the semi-structured interview staff were asked to describe their role and any other relevant experience that they had of working with prisoners during the transition to the community. Table 21 shows the job titles and roles of the eight staff who took part. For identification of quotes, staff will be abbreviated as "S" throughout and their job title will be indicated in parentheses (i.e. S1, Consultant Forensic Psychiatrist).

Table 21. Description of Job Title and Role for Staff in the Qualitative Sample

ID	Job Title and Role
Staff 1	*Consultant Forensic Psychiatrist* S1 has worked extensively as a consultant forensic psychiatrist in a number of prisons including several that were included in the study. They have been a service lead and so have experience of clinical practice and oversight and commissioning arrangements.
Staff 2	*Probation Officer* S2 has worked as a probation officer based both in the community and in prison. The role involves carrying a caseload of offenders who have an indeterminate sentence due to either public protection or life sentences or are judged to be high risk offenders. At the time of interview they were based in a prison probation team.
Staff 3	*Clinical Lead for Nursing* S3 has been a mental health nurse for 28 years. They have extensive experience of nursing in psychiatric settings and have worked in a number of prisons for the last 10 years. Prior to this, they worked with homeless persons units in London. At the time of interview, they were the clinical lead for a prison mental health inreach team.
Staff 4	*Mental Health Nurse / CTI Manager* S4 has been a mental health nurse for a number of years and has worked in the community, in inpatient units and in prison. They were a CTI manager in the current study and had the most experience of delivering the intervention. In addition to this they worked in a prison primary mental health care team triaging referrals to other mental health services in the prison.

Staff 5	*Prison Mental Health Liaison* S5 has 30 years of experience working as a mental health nurse and has worked in the community, in inpatient units and in prisons. Their current role involves working with a mental health trust to liaise with prisons and identify when patients have entered custody. They can then visit patients in prison to identify if referrals to services are needed. In addition to this, they were involved in assessments for admission to the trust's medium secure inpatient facility.
Staff 6	*Community Mental Health Nurse* S6 has a number of years working as a community psychiatric nurse with patients in the community. They were interested to take part in the interview and worked with patients who had been released from prison but identified that this only happened occasionally. At the time of interview, they were working in a community mental health team as part of a multidisciplinary team.
Staff 7	*Mental Health Nurse / CTI Manager* S7 is an experienced mental health nurse and was the CTI manager at one of the study sites. They had previously worked as a mental health nurse in the prison mental health inreach team of one of the sites.
Staff 8	*Mental Health Nurse / CTI Manager* S8 is a mental health nurse who was the CTI manager for several of the study sites.

8.2.4. Themes from Staff Interviews

When staff interviews were analysed on their own the following themes were identified: Needs and problems on release, perceived benefits and problems and practicalities of the CTI and barriers and facilitators of care in the transition from prison to the community (Figure 8.).

Needs and Problems

During the interviews, staff participants talked about a number of needs they perceive prisoners with mental health problems have on release.

Housing

All of the staff indicated that housing was a common need and that addressing this need was a high priority.

> *When someone's released they need somewhere to sleep that same day. (S4, Mental Health Nurse / CTI Manager)*

The major thing is accommodation. (S2, Probation Officer)

I think housing is the biggest problem. (S4, Mental Health Nurse / CTI Manager)

Staff indicated that even though housing should be seen as a high priority, arrangements are not always in place when a prisoner is released. Many of the staff said that homelessness was a very real prospect for some prisoners and they saw having housing as necessary in preventing deterioration of mental health problems and important in accessing other services.

If you go out to homelessness then how could you possibly look after your mental health? Housing is up there in terms of the needs, probably the most important need really. (S1, Consultant Forensic Psychiatrist)

Furthermore, in the interviews the impact that homelessness could have on the risk of reoffending was explicit.

Unless they get help they leave but they don't stay out. 2 days ago, we had a patient, he went out homeless, had no address so no benefits, no permanent address, no family. (S4, Mental Health Nurse / CTI Manager)

If someone is more or less sofa surfing then it's more or less a matter of time before they're going to commit an offence. (S5, Prison Mental Health Liaison)

Staff mentioned problems related to the housing that is available and raised concerns about prisoners returning to hostels with a large number of people who have similar problems. It was thought that this was not conducive to reintegration or mental health, and may increase the likelihood of drug and alcohol use.

Someone who's got substance misuse issues and mental health issues placed in the hostel with other users and things like that and it can be setting them up to fail quite a lot. (S2, Probation Officer)

They can take quite a slide down the social ladder in many ways and be at a disadvantage and in with other people that have exactly the same problems regarding drugs, alcohol etcetera it tends to be a ghetto basically, a dumping ground for people with mental health and alcohol problems. (S5, Prison Mental Health Liaison)

Many of the staff did not expand on why housing is so difficult to put in place for release. However, a few did talk about the problems that prisoners and staff face in finding places to stay. Prisoners' lifestyles and behaviour before imprisonment were mentioned as well as issues to do with availability.

Sometimes they have brought some problems to some degree upon themselves by becoming intentionally homeless, by running up housing debt, not claiming their benefits properly, getting into all sorts of scrapes and anti-social behaviour. That can lead to them being difficult to place. (S5, Prison Mental Health Liaison)

He'd lived in so many hostels, and caused trouble and so he's banned from a lot of them. (S4, Mental Health Nurse / CTI Manager)

Approved premises are a possibility if someone's coming out with a licence to go to but spaces are extremely limited and are dotted about London. (S2, Probation Officer)

Health

Most of the staff were mental health professionals and it was to be expected they saw health needs as important in this period and their focus was on the provision of mental health care in the community.

Need for health continuity particularly for people with established, severe and enduring mental illnesses. (S1, Consultant Forensic Psychiatrist)

Being from mental health I see that as essential basically. (S5, Prison Mental Health Liaison)

For us the primary focus are their mental health needs. There are a host of mental health needs that need to be assessed and addressed, most often schizophrenia, but also personality disorders. (S6, Community Mental Health Nurse)

Some of the staff also mentioned physical health conditions and stated that contact with primary care services and linking prisoners with GPs was important. In some cases this was linked to comments about the increased risk of physical health problems due to their lifestyles but it was also recognised that GPs had a part to play in mental health care after release.

There are also lots of health problems that have been stored up from the kind of lifestyles that this group have and so we're often trying to liaise with GPs to make sure those things are being addressed as well. (S6, Community Mental Health Nurse)

It falls to them [GPs to prescribe medication] so they have to. It's either the GP or hospital. (S4, Mental Health Nurse / CTI Manager)

Drugs and Alcohol

Drugs and alcohol were not mentioned as often as housing and other health needs but those that did raise it were clear that relapses into addiction were common and that this could have an effect on mental health and other issues related to release.

> *Not engaged with a DIP [Drug Interventions Programme] or something like that we can get lapses quite quickly. (S2, Probation Officer)*
>
> *Once under the influence of their peers and the drugs and the alcohol how quickly things spiral out of control. (S5, Prison Mental Health Liaison)*

Finances and Employment

Staff were not directly responsible for arranging finances and return to employment, however, they were involved in assisting prisoners in this. Several of the participants raised the delay between release and receipt of benefits as a problem. It was noted that prisoners do receive a small amount of money on release, however, it was not seen as sufficient to support them with the delay to benefits.

> *Benefits is a problem, again, you should be applying before release. You know when they'll need them but they'll mostly have to wait 2 to 3 weeks. That money on release isn't enough. (S4, Mental Health Nurse / CTI Manager)*
>
> *Finances as well, it takes so long to get benefits. (S2, Probation Officer)*
>
> *Obviously employment's a huge one. (S3, Clinical Lead for Nursing)*

Experience of Returning to the Community

Whilst talking about the needs and problems that prisoners face some of the staff made statements that gave an overview of what this period is like for those returning to the community after spending time in prison. They acknowledged that it was a difficult period and that prisoners found the return to the community stressful.

> *Release is a big thing for inmates. I think a lot of the time they are really lost. They don't know what's happening, and they don't know how to go about it. (S5, Prison Mental Health Liaison)*
>
> *Those can be six very busy weeks and very frustrating weeks and that's when people become tempted to drink or [use] drugs and they can start sliding back into bad old ways. (S6, Community Mental Health Nurse)*

My experience of that patient group is that they have been through quite a traumatic process, that the process of being imprisoned is quite traumatic, even if they won't readily admit that. (S6, Community Mental Health Nurse)

They can't pay cash on a bus and things like that now so it's minimal things (S2, Probation Officer)

Very few of the staff raised issues that were outside of the topic guide, but some staff did reference education or training to support them post-release as areas where prisoners needed support.

Many prisoners have educational needs. (S1, Consultant Forensic Psychiatrist)

Services Involved in Care

Staff participants were asked which services were involved in prisoners' care in the lead up to release and during the transition to the community. Participants talked about the health services that would be involved in planning. All participants referenced community mental health teams at some point during the interview, and a number of other services were mentioned including primary care and drug and alcohol services.

Certainly there needs to be a CMHT. (S5, Prison Mental Health Liaison)

In addition, a number of other public sector services were said to be involved. Probation services were mentioned more often than any other, but the police and social services were also stated to be important as were job centres.

You have the police involved … social services if there's children involved. (S2, Probation Officer)

Third sector organisations were involved in providing planning for release alongside the public sector. These were mainly focused on housing support and were available only to sentenced prisoners.

So for example St Giles Housing, the DePaul Trust or whatever, we would tend to liaise with them. (S2, Probation Officer)

Well for both, you've got charities, Shelter … St Giles, or now St Mungo's. (S4, Mental Health Nurse / CTI Manager)

In addition to public and third sector services, the introduction of private probation services was discussed. This was as a result of Government reform and the tendering of probation services for medium and low risk offenders.

> *Obviously now you're going to have these regional private probation firms as well and we're waiting to see how that is going to pan out. (S2, Probation Officer)*

One member of staff indicated that a typical prison mental health inreach team in London would need to work with a large number of community mental health services across a number of London boroughs. Another stated that when all services were considered up to 12 services could be involved in planning for one prisoner's release.

> *In excess of 30 working relationships with different boroughs and with the various teams inside them. (S1, Consultant Forensic Psychiatrist)*

> *I can see up to a dozen up through the MAPPA [Multi-agency Public Protection Arrangement] process. (S5, Prison Mental Health Liaison)*

Critical Time Intervention

Perceived Benefits

The staff participants were in favour of the CTI approach and all indicated that they thought it was a sensible approach that was needed to overcome existing problems. This highlighted the perceived benefit among those working with prisoners prior to release, those who were in contact with them during the transition period back into the community, and those that engaged with patients post-release. Staff seemed to particularly approve of the through the gate aspect of the CTI with support continuing in the community. It was noted that this was a difficult time and support in this period would be beneficial.

> *Helping somebody in that period of release which is a stressful, difficult transition period, just staying in touch with them is just so simple that it can't help but be a positive. I think there is something really important about that mentoring process through the gate. (S1, Consultant Forensic Psychiatrist)*

> *I was really quite pleased to hear about the process to be honest with you. A lot of the time people fail or get recalled back to prison is in those first few weeks so if everything is slowly aimed at getting them going forward from that end is going to be very positive. I think the six week period is the critical time and I think it's sensible to go for that approach. (S2, Probation Officer)*

> *I think that kind of initiative would be great. It's exactly the kind of thing that's going to fill that gap between what the prison teams do and what we do. And it's targeting that first period where we might struggle to pick people up. (S6, Community Mental Health Nurse)*

In addition to approval of the additional support in the first few weeks in the community, staff thought that the activities that were completed by the CTI manager would be useful and would help support existing services and facilitate coordination between services.

> *Each agency will probably tell you that they're bogged down in paperwork so to have someone whose dedicated role is to work with people and less administrative sort of side of things is good to hear and good to see. (S2, Probation Officer)*

> *Just taking them to appointments and getting things done then, that's you know, you're half way there as it were. (S2, Probation Officer)*

> *You've got to have that joined up process that we hopefully are all working towards that and will welcome any development that carries that forward. (S5, Prison Mental Health Liaison)*

In addition to the benefits for released prisoners, one of the participants who had had a role in supervising CTI managers raised the benefits for staff.

> *It's been a really nice experience for the CTI managers that, you know, normally you only ever see people at their very worst when they're coming back into prison or they're in crisis or they're really unwell and to actually see people hopefully reengage in the community and do well, I think is positive. (S3, Clinical Lead for Nursing)*

Perceived Problems

Few of the staff volunteered negatives aspects of the CTI, however, when prompted many were able to think of reasons that the CTI might not be effective, or problems that it could face. One member of staff foresaw some problems that the CTI could not resolve or have an effect on but was circumspect about the nature of mental health and indicated that the CTI was still worthwhile.

> *There are factors around that CTI can't control and that is the harsh reality of mental health isn't it? It doesn't mean that CTI doesn't have a place or that it can't help. (S1, Consultant Forensic Psychiatrist)*

Some of the staff suggested that six weeks would be long enough for some prisoners but that others would still have significant problems at this point and that removing additional care would seem counterproductive.

> *It may well be that you have a person who is now quite capable of going to every appointment and doing things for themselves and a significant improvement in mental health but you could also have that person at six week who is nowhere near that. (S2, Probation Officer)*

> *If you get to the six weeks point and this person isn't engaged do you just disengage at that point? (S1, Consultant Forensic Psychiatrist)*

> *I think people will very happily devolve their responsibilities. It is very hard when you are trying to get someone to do something that you know they should do, but they won't. (S5, Prison Mental Health Liaison)*

The issue of confusion about the role of the CTI was raised and there was a concern that the addition of a professional would end up with work being duplicated by different services. It was stated that this lack of coordination could lead to inadequate planning for release.

> *Clarity on what the role is needs to be kind of highlighted, because you don't want to duplicate work. (S2, Probation Officer)*

> *I see kind of parallel working going on and people doing either the same thing twice or completely different things. So somebody is setting up housing over there, but healthcare is being set up in a completely different part of London. (S1, Consultant Forensic Psychiatrist)*

There was also concern about the possibility that because the CTI manager was providing some input, community services would not fulfil their responsibility of care for prisoners following release.

> *It's possible that CMHT will think that this person already has somebody working with them so therefore we don't need to get engaged. (S1, Consultant Forensic Psychiatrist)*

> *I think that there are certain cultures of gate keeping out there that will not be budged or not impressed by it and not want to actually fall in with it. That is just a feeling I get. (S5, Prison Mental Health Liaison)*

One of the CTI managers raised the issue of dependence of patients on staff and suggested that this could be an issue especially if the CTI manager had worked with a prisoner for their whole time in prison. This could then be problematic when the CTI input ended after six weeks and service users returned to usual levels of care.

Maybe with patients, because of their character, they can actually become quite dependent. Every little thing they'll be calling and in contact with you and maybe then when they get to 6 weeks they've got used to that and can't do things for themselves. (S4, Mental Health Nurse / CTI Manager)

A member of staff from the community wondered whether the initial period of six week was not a time where problems would start and that additional support after this point may be needed.

The one thing I might say is whether there's maybe a honeymoon period after release and it's after six weeks that the major problems start. That's just a hunch but their families might be glad to have them back, maybe they can handle drugs and alcohol for a short while before that causes an issue too. (S6, Community Mental Health Nurse)

Practicality

In addition to their thoughts on the benefits and problems of the CTI model, staff participants were asked to comment on whether it would be practical outside of a research project and whether they could see it being implemented in normal practice. The response was generally that it would work in practice, however, there were questions about funding and adoption away from sites that had experience of the benefits of CTI during the research trial.

Think in practice it would work really well. (S3, Clinical Lead for Nursing)

To think of CTI as a standard part of the model it would need to kind of almost be prescribed by commissioners as part of their service objectives. (S1, Consultant Forensic Psychiatrist)

The major question is who's going to pay for it isn't it. When budgets are being cut I'm not sure who's going to have the money to fund that and keep it going. (S6, Community Mental Health Nurse)

Barriers and Facilitators for Care in the Transition from Prison to the Community

Legal Status

The problems of working with remand prisoners compared to those who are sentenced and have a set date of release was raised by many of the staff. The potential for remand prisoners to be released at short notice was the main reason given for this difficulty and in some of the sites remand prisoners made up the majority of the caseload.

It is more difficult for remand prisoners of course. Within a remand prison the challenges of the high turnover population, the challenges of rapid, sudden, often unexpected release, going to court and not coming back mean that I don't think you can ever reach 100% [with a CPA meeting]. (S1, Consultant Forensic Psychiatrist)

[If] the case collapses, it gets thrown out, they get granted bail and people are unaware where they are and that they may potentially be released without much notice and indeed any notice which is quite often the case. (S5, Prison Mental Health Liaison)

It was raised that there was no formal process for the court or prison to notify mental health inreach teams of a service user's release. Due to this it takes time for the mental health inreach team to be aware that the service user is in the community and this was seen to be key in delaying provision of care in the community.

There is no formal notification. It just depends if they are brought to the attention of the court diversion scheme. (S5, Prison Mental Health Liaison)

Very nature of just the throughput you have and the churn and actually keeping an eye on where your prisoners are and the fact that they haven't been sort of surprisingly released from court on a Friday afternoon. You weren't expecting them to be released and then all of a sudden they were and then you wouldn't realise until Monday by which time they'd been out in the community for, you know, a couple of days, and you know we're trying to, sort of, backpedal then to link them in with services (S3, Clinical Lead for Nursing)

Level of Risk

Two staff participants raised prisoners' level of risk as a factor that influences outcomes after release. Their opinions on whether the release process worked better for low or high risk prisoners differed and this may be influenced by factors like their professional role. One indicated that the process works better with high risk prisoners and focused on the involvement of probation services, whilst another thought that low risk prisoners had better outcomes and that community mental health teams were reluctant to accept high risk prisoners.

The release process works better with the higher risk the person is. It's when people are only classed as medium risk of harm people start to slip through the net. The ones who are probably out offending daily but they're just shoplifting as opposed to committing a serious violent or sexual offence or something like that so they're going to be the group that you'll probably find, I think that's going to need more support (S2, Probation Officer)

Low risk, but very clearly defined severe and enduring, that have probably been on their books for a long long time, and periodically come into prison… they're

much more straightforward I think and, sort of, the teams know them and know them well. (S3, Clinical Lead for Nursing)

Stigma and Social Exclusion

Several of the staff participants raised the issue of stigma and social exclusion of offenders for reasons related to both a history of offending and mental health problems. The staff participants reported that this was an issue with both community mental health teams and housing providers and affected the quality and access to care and services received by offenders after release.

Long standing history of unconsciously, rather than saying it deliberately, but unconsciously kind of rejecting people who have offended [by CMHTs] (S1, Consultant Forensic Psychiatrist)

People who've just come out of prison probably aren't a priority [for housing] (S4, Mental Health Nurse / CTI Manager)

[There is] the usual sort of discrimination and social exclusion for mentally ill offenders. (S3, Clinical Lead for Nursing)

Family Support

Many members of staff specifically mentioned the importance of family support in the period after release. Participants pointed to the challenges prisoners encounter when reengaging with their families, and the barriers to receiving the family support they might need.

Building their family ties back up can be difficult and you're asking some people very young to become quite independent. (S2, Probation Officer)

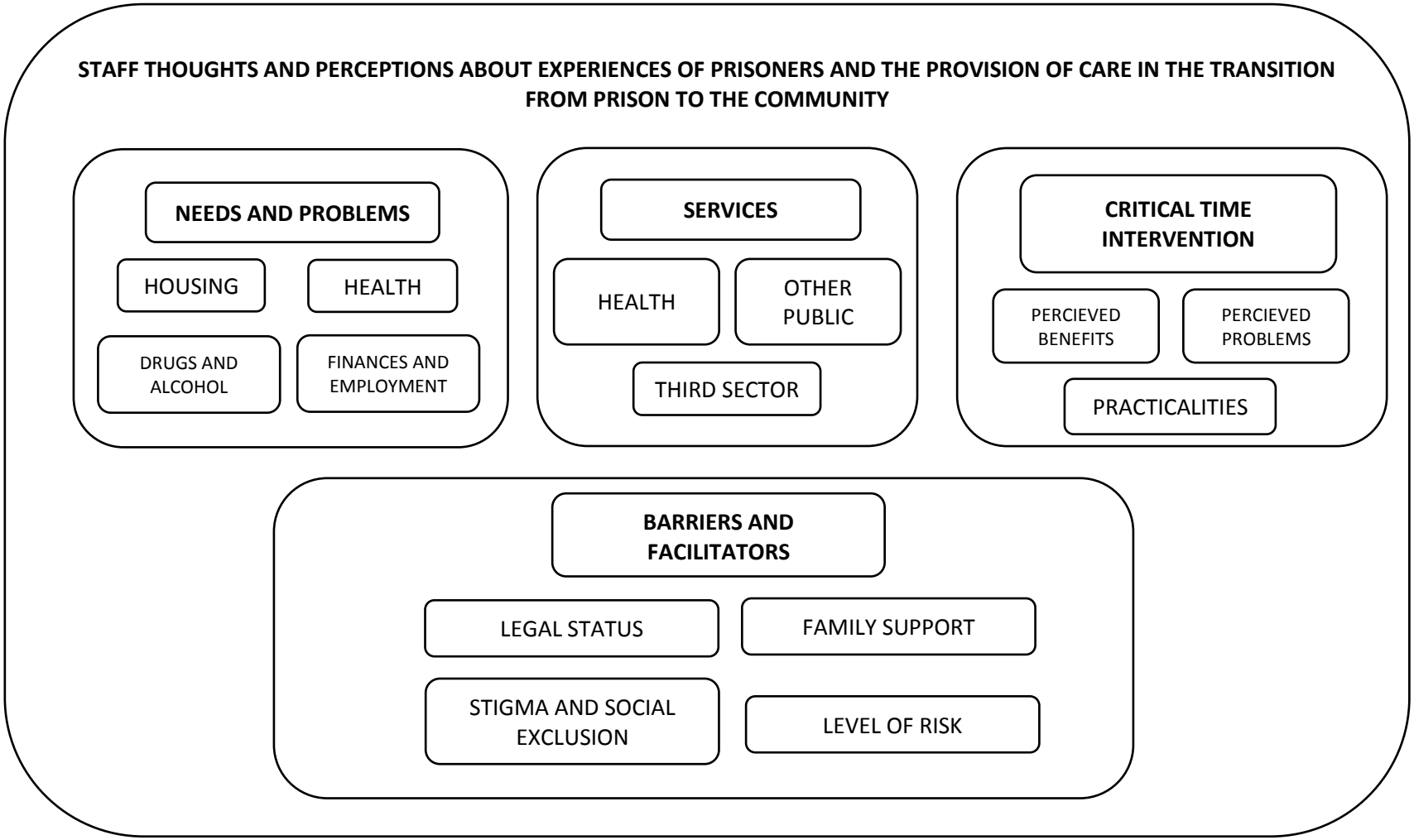
The social workers in the team would be able to talk at more length about some of the family issues, but that's something that will be an issue. The kind of fractured family unit because of that period of exclusion and being away from either the partners or from parents. And often it comes down to parent's to provide the housing. (S6, Community Mental Health Nurse)

Staff participants referred to the failure of services to engage with families, and the potential need that they also have for support in during the release period which might facilitate this transition and engagement of families and prisoners.

Families, which we sometimes forget. It is not just us that forgets them, I think they are systemically forgotten actually in amongst this. Contacting families isn't something that easily happens routinely without lots of reminders within

most of the prison mental health teams that I've worked in. (S1, Consultant Forensic Psychiatrist)

Figure 8. Staff Thoughts and Perceptions about Experiences of Prisoners and the Provision of Care in the Transition from Prison to the Community



8.2.5. Overlapping Themes from Prisoner and Staff Interviews

The themes presented above were identified from prisoner and staff interviews separately and they relate closely to the questions in the topic guide, although several themes were raised spontaneously by participants. In addition to this, prisoner and staff interviews were analysed together and a number of common themes emerged from the two groups when considered concurrently. These themes are 'loss of control in prison vs responsibility in the community', 'patients' involvement in care and collaboration', 'personal relationship in the provision of care' and 'fragmentation of services'. These themes were supported by both prisoner and staff testimonies and are described below and shown visually in Figure 9. The CTI appears to have a beneficial impact on these themes and this is discussed below. Whilst the themes are assumed to be related and are likely to interact with each other, the content of the qualitative interviews did not allow this to be explored.

Loss of Control in Prison vs. Responsibility in the Community

Prisoners and staff both raised issues that related to loss of control in prison vs. responsibility in the community. Prison is defined by restriction of liberty, routine and compliance (Section 2.4.; Section 3.4.) but from the moment of release, patients are required to regain personal responsibility and play an active role in organising their care. There is a stark contrast between these two positions and patients are required to suddenly adjust to their new circumstances once in the community.

> *But particularly that point of transition from an institution in which you are locked up 23 hours a day, you have your meals given to you, to make a transition if you have mental health problems, from that into a community setting where you are much more autonomous and have to be self-directed is very challenging for a lot of people. (S1, Consultant Forensic Psychiatrist)*

> *Little things that we might see as trivial that for someone who's been living in a prison environment for so long is going to be quite difficult to adjust. (S2, Probation Officer)*

> *I think there are a few teams that are meant to be helping. Maybe St Giles, I don't know, but as I said, I think I'll just have to sort this out after I leave. (P10, TAU, Pre-release)*

> *But I've been and gone enough times now, and it's once you get outside that you need help and so you go and you've got to do what you can. But most of the time there's no help out there. (P13, TAU, Pre-release)*

The CTI is an initiative that can act to reduce the abruptness of this change by providing both an increasing sense of control as release nears and support during the first weeks in the community. CTI managers have the time and remit to work with prisoners before release and to start preparing them for the increase in autonomy and to then also work with them from the day of release to provide additional support that can reduce the need for patients to immediately take on all responsibility for their care. The CTI managers regarded their role, not as assuming full responsibility, but as assisting the patient and helping to equip them for after the six week CTI period ended.

> *CTI empowers them and means that you can help them that bit more after they go. (S4, Mental Health Nurse / CTI Manager)*

Prisoners reported that they valued this extra support in the community and some directly compared this to previous releases where they had been left to their own devices. Participants indicated that they felt more supported and that community teams had been more responsive as a result of this.

> *[CTI Manager] made sure they knew I was out. Last time they weren't very good at all. Just the injection and nothing else. But this time they've been better, [CTI Manager] arranged that we could go to the team and I had the injection and we all chatted about what would be helpful. (P9, CTI, Post-release)*

> *I didn't really get any help last time and there wasn't someone like [CTI Manager] who was helping me plan for after I go. So that's been better I think (P5, CTI, Pre-release)*

Family support can also be helpful in this period to reduce the need for full responsibility to suddenly be transferred to patients. Participants who had good relationships with their families reported that parents were willing to assist them in managing their care. As has been described, staff participants indicated that families are often lost in this process and prison inreach teams do not routinely consider their involvement. The impact that they can have in helping patients deal with the sudden responsibility associated with return to the community should be considered by staff and where possible should be used alongside support from services.

Patients' Involvement with Care and Collaboration

All of the participants stated that they knew at least something about their care, but they also felt that everything was done behind the scenes and that they were not involved.

They come and ask questions then just go off and you don't know who they're speaking to or who you're meant to speak to when you get released. That's how it is, you might get a bit of information when you leave but it all seems to happen between them and not with us. (P12, CTI, Pre-release)

Sometimes they come and they're just in a rush to get away so maybe some more time to explain things better. (P13, CTI, Pre-release)

For many of the participants there was a sense of frustration that health services in particular talked to and dealt with them in a controlling or at least patriarchal way. They did not feel involved in their own care or that their own beliefs and opinion about their situation were considered and decisions were not being made in collaborative way.

They always think they know best. They'll tell you you need this or that drug and everything you think is wrong but I can sort myself out. I don't need to go visit some team for them to tell me how to live my life. (P6, CTI, Pre-release)

The restrictions of the prison environment was also identified as preventing opportunities to interact with mental health staff.

I don't know who to speak to and someone saw me once and then they just talk to your through the door and that's it. (P7, CTI, Pre-release)

Participants who were in the CTI arm suggested that their interactions with the CTI manager were more open and collaborative than their usual contacts with mental health professionals. They thought they were more involved in their own care and there was a sense that the CTI manager had time to discuss plans and make joint decisions.

She's just had more time for me than anyone else. (P9, CTI, Post-release)

With [CTI Manager] and [Inreach Nurse] I feel like I get seen more. Which I think I need before I go. Just to make sure. (P3, CTI, Pre-release)

I guess it has been because it's an extra person to help isn't it. (P14, CTI, Pre-release)

The CTI managers also described the collaborative approach that is used and gave examples of occasions where patients were encouraged to take the initiative but were supported in doing this.

One thing that I can talk about is that councils dismiss these people very quickly. If I go with them then I'll say to them ok go to talk to the person, but I have to step in and explain the situation and then councils will do something. I

think prisoners on their own will find it quite tricky and won't get very far. (S4, Mental Health Nurse / CTI Manager)

Personal Relationships in the Provision of Care

Both prisoners and staff spoke about the personal relationships that are developed between patients and professionals and also between professionals across teams.

During the interviews, patients readily identified particular members of staff that they had good relationships with and some indicated that they were surprised by the quality of care in prison and related this to the approach of particular staff.

I was surprised at [Prison C], it's got this real rough reputation and it isn't great you know, but the mental health team here is great. (P3, CTI, Pre-release)

Staff also reflected on personal relationships in the provision of care and commented on how leaving prison ended relationships with mental health inreach team professionals and new relationships would need to be built which may take time.

That's the problem in all the services that when they start to build a relationship with someone they change and you know it's hard for them to make, build these relationships. (S2, Probation Officer)

In addition, it was clear from patient and staff participants that when they had a good relationship with community mental health nurses or other professionals in the community they thought the process of making contact with community services would be easier.

If you have someone you know already that always works fairly well. They go back to the same member of staff and that relationship is already there (S6, Community Mental Health Nurse)

I have a good relationship with my GP and he's the one who has to deal with me when Croydon team won't. So I think again he just sends a letter to them and then they know what I've been like in prison. (P7, CTI, Pre-release)

One member of staff particularly focused on the issue of the relationship that is built up between prison mental health staff and patients and suggested that the knowledge gained in prison would be useful in the post-release period, both in terms of supporting the patient, and also sharing information with community professionals about issues related to wellbeing and risk. Another referenced the human element of the intervention.

It's continuity isn't it. It's the fact that you know your prisoners, or hopefully you do, after he's been with you for a while. You know his risks, you know his strengths so yeh, it's that continuity of care. (S3, Clinical Lead for Nursing)

That, staying in contact with somebody, I think the human contact element is probably really important to them. (S1, Consultant Forensic Psychiatrist)

Prisoners also made comments to this effect and said that continuing to work with a member of staff that they had a pre-existing relationship with was beneficial in the first few weeks in the community. The CTI aims to achieve continuity of knowledge as described by staff and the maintenance of a relationship developed in prison across the transition. One prisoner was pleased that a member of staff they had in a previous prison was their CTI manager.

{CTI Manager] said he'd sort me out this time and he can come with me. That'll be decent, they need [the CMHT] to know who I am and what's going on. Inreach know who I am, they know my problems. (P7, CTI, Pre-release)

Many of the staff mentioned working with other staff in different services and attributed many of their successes to having a good working relationship with individuals rather than a strong system being in place.

You are always looking for someone that will champion your cases and if you have someone that is particularly aware or maybe has a mental health background then that is incredibly helpful. (S5, Prison Mental Health Liaison)

Similarly, failures in this period were attributed to poor relationships with individuals in other services, or individuals working in a less than optimal way.

You will get people gate keeping, you get people trying to shift responsibility to other services, to other boroughs, god knows where. (S5, Prison Mental Health Liaison)

Most of the prisoners and staff limited their comments to the effect of past relationships and positive examples of good relationships improving care and continuity through the transition. When asked whether staff's personal qualities affected relationships, both samples were understandably reluctant to frame their answers towards negative qualities but some did state that problems with some members of staff were difficult to overcome.

If somebody is lucky enough to have a diligent care co-ordinator that will follow them in then all well and good, things go swimmingly…If it is a difficult and perhaps unpleasant individual, they may have a bumpier ride and they will get no service really because they will find themselves with nobody willing to particularly help them. (S5, Prison Mental Health Liaison)

Fragmentation of Services

Many of the problems with health, probation and other social services relate to the fragmentation of services. As is seen in the themes from staff interviews a large number of services can be involved in a patient's care in this period. Staff indicated that prison, health and other services do not work well together, however, their separate but linked responsibilities means they have to in order to provide an acceptable level of care.

> *Prison service does not do joined up thinking and they are not involved really in the planning of the aftercare. (S5, Prison Mental Health Liaison)*
>
> *We can't provide housing, we have to advocate for them elsewhere for that at the council and that responsibility lies with them strictly speaking. (S6, Community Mental Health Nurse)*
>
> *It can be quite cumbersome in trying to get agencies all together. (S2, Probation Officer)*

The fragmentation of services has other effects. Several of the staff interviewed raised the issue of information sharing and stated that services did not effectively share information either due to concerns about confidentiality and data protection, but also mistrust between statutory, non-statutory and private bodies.

> *[People can be] highly fearful that they will pass on information that they shouldn't, that they will do it by a means that is insecure. And I have found that some individual probation officers they refuse to share anything and you think what is the point? You would ask me if there is something worrying that you should know about. (S5, Prison Mental Health Liaison)*
>
> *My only concern down about in the future possibly is information sharing. (S2, Probation Officer)*

Another side effect of fragmentation is the competition between different service providers that may not be in the interest of optimal care. One member of staff relayed that when his service was offered at no cost to a private healthcare provider to support patients at that prison it was turned down.

> *Everybody has to compete where really it is not in anybody's interest, it is all about the bottom line, it is not about the quality of care. You can tick boxes, you can go through any exercise and people look for ways to fake the results basically and that is not helping anybody at all. (S5, Prison Mental Health Liaison)*

Staff were clear about the effects of this fragmentation and they acknowledged the need for greater cooperation.

> *The overriding need is for cohesion, an overview, some body that will supervise the whole process of coming out of prison. (S5, Prison Mental Health Liaison)*

> *I think if they [services] are not joined up and doing it together it's got the potential to go wrong. (S1, Consultant Forensic Psychiatrist)*

There were several existing initiatives which were seen to bring services together and to solve some of the problems caused by fragmentation. Staff participants were positive about the Care Programme Approach (CPA) where it was in place, however, they were clear that it is often not adhered to and for remand prisoners may not be practical and additional support is still needed.

> *I think it works well when people adhere to the CPA process, it is quite simple and it is quite clear. (S5, Prison Mental Health Liaison)*

> *It could be argued really I suppose that if people were adhering to CPA process that this wouldn't particularly be necessary. But as we clearly know it is necessary. (S5, Prison Mental Health Liaison)*

> *We can have CPAs. They're poorly attended historically and very often you'll have no response from community teams. So it's really trying to get community teams to engage, is, remains problematic. (S3, Clinical Lead for Nursing)*

Multi-agency Public Protection Arrangements (Hilder & Kemshall, 2013) were another initiative which were seen as a way of bringing together diverse agencies and service. These arrangements are used for high risk prisoners and would not be available for the majority of patients on the mental health inreach team caseload and the majority of participants in this thesis.

> *One of the better initiatives has been the multi-agency public protection arrangement which although it only really targets the harder end of offenders. (S5, Prison Mental Health Liaison)*

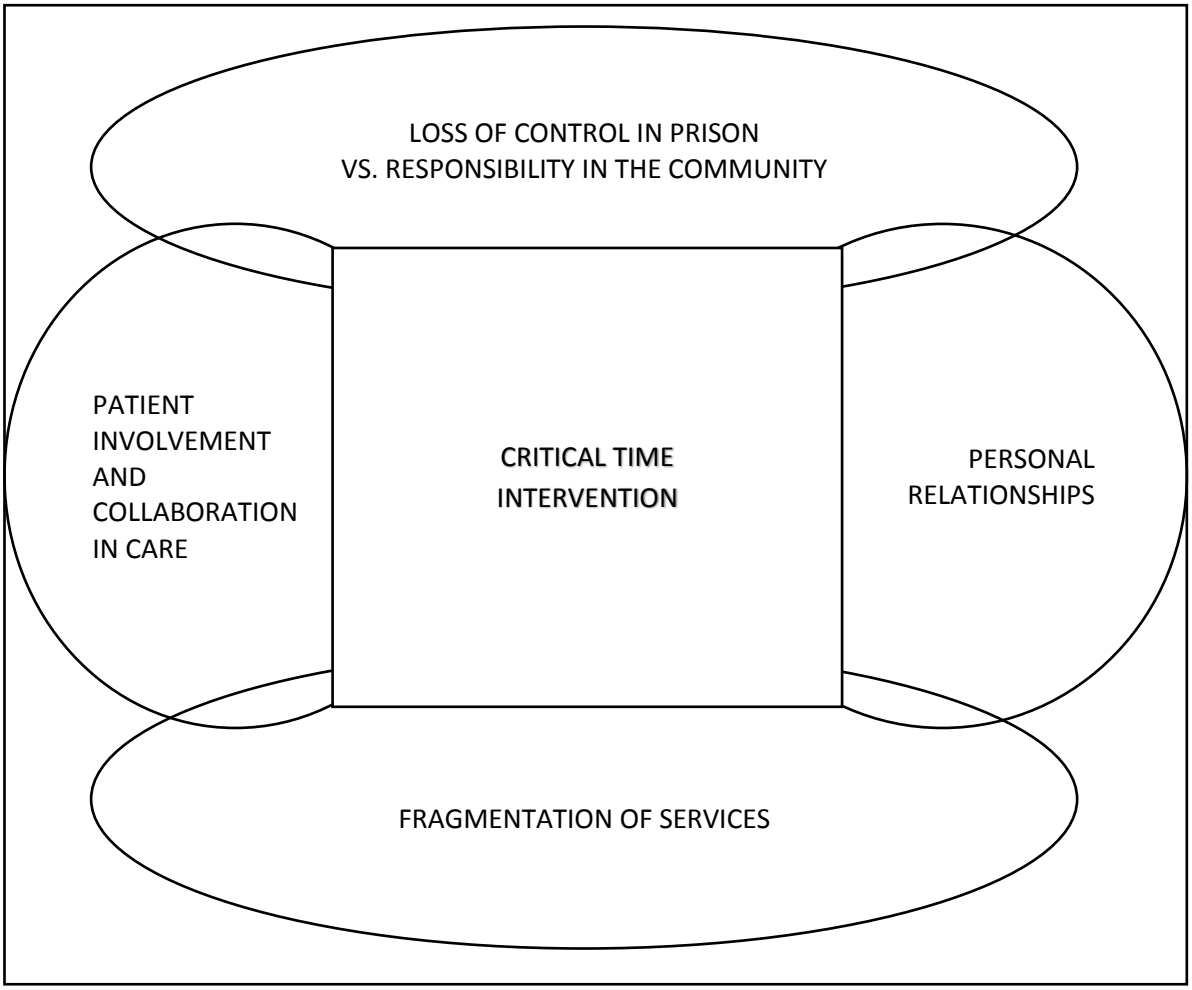
CPA and MAPPA are both seen as good examples of initiatives that can address fragmentation of care and the CTI is also designed to do this. The CTI manager is able to dedicate time to coordinating services and staff who had delivered the intervention saw the value of this.

> *You have a tangible, physical link, a person you know before and who follows you out. That sounds like your ideal for getting someone through those difficult 6 weeks basically after coming out. (S5, Prison Mental Health Liaison)*

During the course of the study, there was at least one occasion where MAPPA was involved but had no effect on improving a patient's care on release. In this case, the failure to provide care was seen as directly linked to an increase in the patient's risk and it was the CTI which ensured the patient was seen by a community mental health team.

> *We had a guy that was very high risk, he was, sort of, level 2 MAPPA, he'd served a long sentence, and there was difficulties at the beginning, pre-release, in terms of the community team saying they hadn't received the referral and then sending it again and then they did receive it and then we assumed that they'd picked him up but then it looked like they hadn't picked him up and, you know, who was taking responsibility. And this obviously was a CTI guy and it did get resolved. (S3, Clinical Lead for Nursing)*

Figure 9. Overlapping Themes from Prisoner and Staff Interviews Regarding Provision of Care in the Transition from Prison to the Community



8.3. Mixed Methods Results

The findings of the quantitative and qualitative components of the thesis have been outlined (Section 8.1.; Section 8.2.) but there also needs to be a consideration of where mixed methods findings are present.

The main focus of the quantitative results was on whether the CTI can improve service contact and service provision in the six weeks after release. The findings suggest that the CTI was effective in improving outcomes at this time point and the qualitative findings demonstrate the perceived benefits of the CTI from both prisoners and staff's perspectives. The qualitative findings also suggest the processes involved in improving contact with any mental health professional and allocation of and contact with a care co-ordinator. In addition, the qualitative component is able to point to perceived negatives and the practicality of the CTI approach in a way and the quantitative results alone are not able to do this. The quantitative findings were focused on mental health services but the qualitative findings suggest that the processes are similar for other services, such as primary care and probation.

Another focus of the quantitative results was to examine whether factors associated outcomes in the transition from prison to the community could be identified. The quantitative component identified remand prisoners as having poorer outcomes compared to sentenced prisoners and the qualitative findings were able to elaborate on this and enhance understanding of why this might be. Prisoners and staff talked about the uncertainty surrounding release for prisoners on remand with prisoners highlighting the problems this caused for housing and their families and staff emphasising the difficulties this creates for care planning. The qualitative findings also suggested that prisoners who have been granted parole or had days added on for disciplinary reasons are also subject this uncertainty and may have similar outcomes. The qualitative findings suggest that other factors like risk and family support, that the design of this thesis did not capture, also have an effect in this period.

The quantitative findings show that contact with mental health services, allocation of a care co-ordinator and contact with a care co-ordinator are low at each time point even for participants in the CTI group. The qualitative findings support that these outcomes are low after release and both prisoners and staff commented on the lack of support for prisoners in this period.

In the quantitative component, a number of secondary outcomes were included due to their importance in the transition from prison to the community and the potential for the CTI to have an effect. Significant differences were found on several variables with participants in the CTI group having improved outcomes. The qualitative findings suggest that the CTI manager was able to target these variables and they were seen as important outcomes by members of staff. For example, the CTI managers reported that registering a prisoner with a GP in the community was simple when additional time was available to do this.

Chapter 9. Discussion

9.1. Summary of Quantitative Findings

9.1.1. Primary Outcomes

The primary outcomes of the thesis, namely contact with any mental health professional, allocation of a care co-ordinator and contact with a care co-ordinator, focused on the six week follow up for participants in the Critical Time Intervention (CTI) group compared to those who received treatment as usual (TAU; Section 8.1.4). In overview of the main findings, at six weeks after release, participants in the CTI group were significantly more likely to have had contact with any community mental health professional compared to participants in the TAU group. CTI participants were also significantly more likely to have been allocated a care co-ordinator in a community mental health team, and were significantly more likely to have made contact with their care co-ordinator relative to those in the TAU group. Each of these significant findings remained after other variables were included alongside treatment allocation in a logistic regression model.

In addition to the effectiveness of the CTI in improving these outcomes, the thesis also aimed to determine whether there were other factors which were related to significantly better mental service contact outcomes (Section 8.1.4.). The main findings here were that: participants who were convicted, compared to those on remand, were significantly more likely to make contact with any mental health professional within six weeks after release, and were also more likely to have contact with a care co-ordinator, although they were not more likely to be allocated a care co-ordinator. Participants whose GP had involvement in their mental health care prior to entry to custody were less likely to have an allocated care co-ordinator six weeks after release, and were also less likely to have made contact with this care co-ordinator. Participants who were above the cut-off for problem drug use on the Drug Abuse Screening Tool (DAST) were also more likely to have been allocated a care co-ordinator within six weeks. No other significant predictors were found for the main primary outcomes.

The significant differences that were found at the primary endpoint, for contact with any mental health professional, having an allocated care co-ordinator and having contact with a care co-ordinator, were not maintained at six and 12 months follow up (Section 8.1.4.). For contact with any mental health professional, it appears that there was no difference at six or at 12 months, with a ceiling effect for the CTI group and the treatment as usual group making

spontaneous contact with the community mental health team (CMHT) over time. However for allocation of a care co-ordinator and for contact with a care co-ordinator, there remained a difference at six and 12 months with the CTI group having improved outcomes compared to TAU, albeit to a reduced degree. The lack of significance for these outcomes should be seen in the context of loss to follow up and reduced power to detect a difference at these later follow up points.

9.1.2. Secondary Outcomes

A number of other variables were seen as important in the transition from prison to the community and were tested for their significance as secondary outcomes (Section 8.1.5.). At six week follow up, participants in the CTI group were significantly more likely to be registered with a GP, prescribed psychiatric medication and have a care plan in place compared to participants in the TAU group. Participants in the CTI group were also significantly more likely to have returned to prison in the six weeks following release than participants in the TAU group. None of these significant differences remained at six or 12 month follow up and significant differences were not found on other secondary outcomes variables. These additional secondary outcomes had high levels of missing data and should be seen in the context of multiple testing and Type II error. However, they were identified as important potential outcomes *a priori* because of the need to ensure continuity during the transition from prison to the community in terms of both mental and physical health care. These findings should be seen as exploratory but they may provide avenues for further research.

9.2. Summary of Qualitative Findings

The qualitative component explored prisoners' and staff's experiences and beliefs about the transition from prison to the community (Section 8.2.2.; Section 8.2.4.). Prisoners raised a number of needs and concerns about release particularly including housing, health, drug and alcohol problems and finances. They also spoke about uncertainty surrounding release, stigma and social exclusion, family support and the reality of returning to the community after spending time in prison. In addition, they commented on the need for an approach like the CTI, and talked about the positive and negatives of the CTI approach.

Staff members' thoughts on the needs of prisoners on release and during the transition from prison to the community closely mirrored those of prisoners. Needs and problems were identified and included housing, health and access to health services, drugs and alcohol,

finances and employment and difficulties in returning to the community. In addition, they discussed a number of services that were involved in care and these could be grouped into health services and other public sector and third sector services. The increasing involvement of private services in probation was also touched on. Staff also talked about the perceived benefits and problems of the CTI approach and discussed its practicality as a service outside of research. They also talked about a number of factors which impacted on outcomes of prisoners with severe mental illness on release including legal status, level of risk, stigma and social exclusion and family support.

Themes were identified from prisoner and staff interviews separately, but there were also themes that were derived from analysing both samples of qualitative interviews together (Section 8.2.5.). Prisoners and staff talked about the loss of control in prison versus responsibility in the community in terms of organising their care and in particular their interactions with mental health and other health and social care services. Patient involvement and collaboration was raised, as were the importance of personal relationships in the transition to the community. Finally, the fragmentation of services in this period was mentioned and the problems that this posed discussed. The CTI was perceived as being able to reduce the negative impact of the difference in responsibility in prison and the community and fragmentation of services, and as an approach which provides opportunities for patient involvement and collaboration and improved personal relationships.

9.3. Summary of Mixed Methods Findings

There were a number of mixed methods results where findings from the quantitative and qualitative component complimented each other and allowed elaboration and enhancement. The quantitative results found that CTI participants had significantly improved outcomes compared to TAU participants and the qualitative findings highlighted the perceived benefits, problems and practicalities of the approach. The qualitative findings also point to how the CTI is successful in improving outcomes and suggest that it is able to improve outcomes with non-mental health services.

The quantitative findings identified a number of factors associated with outcomes in the transition from prison to the community and the qualitative findings supported these factors, whilst also indicating that other issues not measured as part of this thesis were important, such as additional reasons for uncertainty around release, family support and risk. The qualitative findings supported the low levels of support after release shown in the quantitative

study and both staff and prisoners indicated that they thought prisoners were left to arrange their own care. The qualitative findings also supported the results of the secondary outcomes of the quantitative component and supported the findings that the CTI had a beneficial impact on these variables.

9.4. Interpretation of Findings

9.4.1. Effectiveness of the CTI at Six Weeks after Release

The primary outcomes of this thesis indicate that contact with mental health professionals, allocation of a care co-ordinator and contact with a care co-ordinator are improved at six weeks for prisoners with severe mental illness who receive the CTI intervention (Section 8.1.4.). This finding replicates the beneficial effect of the CTI found in other settings (Dixon et al., 2009; Herman et al., 2011; Kasprow & Rosenheck, 2007; Shaffer et al., 2015; Susser et al., 1997) and shows it can be applied to prisons in England. In this thesis, service contact was broadly conceptualised as driven by the service user accessing mental health services and allocation of a care co-ordinator was broadly conceptualised as the community mental health service responding appropriately to the release of a prisoners with severe mental illness. Contact with the care co-ordinator built on both of these and represented the optimum outcome in the transition between services. The results of this study suggest that the CTI has a positive impact on each of these outcomes and at six weeks can be said to aid the transition from prison to the community for prisoners with a mental health problem.

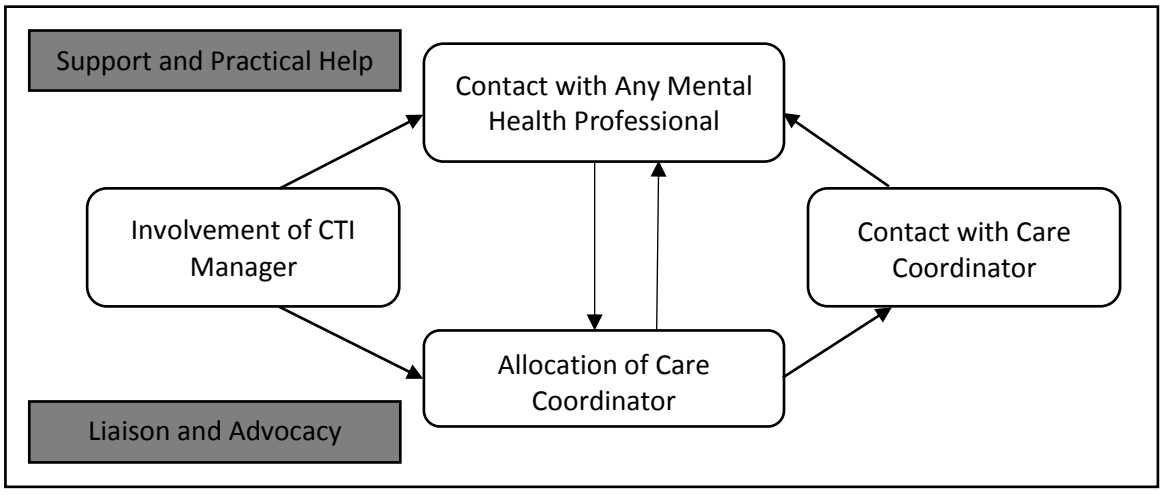
The qualitative component of the study aided understanding these findings by suggesting how the CTI is effective in improving outcomes in this transition period. Figure 10 demonstrates how dual processes may explain the increase in service contact and improved service provision. For example, the CTI manager is able to provide support and practical support through contact with the prisoner both before and after release. They are able to assist a prisoner during the transition to the community and are able to support attendance at mental health services through practical means such as providing reminders and accompanying released prisoners to appointments on public transport. They are also able to work in a more assertive manner than other services that are available in this period and can persuade released prisoners of the value of contact with mental health services and wider services. Evidence from qualitative interviews suggests that this approach is supported by prisoners and staff and leads patients to feel less overwhelmed by the personal responsibility for care on

return to the community and more involved in their care. They also value the maintenance of personal relationships in this stressful period (Section 8.2.5.).

In addition to this support and practical help, the CTI manager is able to liaise with community services and provide advocacy for prisoners before and after release. They have more time to ensure that a plan is put in place and this means they can plan more effectively for release. They are able to contact community mental health teams on numerous occasions over the weeks leading to release and are able to continue to liaise with the team once a prisoner has been released and left the care of the prison mental health inreach team. This approach can ensure that the community team is aware of the prisoners released and is able to act accordingly and allocate a care co-ordinator.

The ideal outcome in the transition is that through these dual processes contact is made with a care co-ordinator and a relationship can be developed that leads to improved outcomes after the time limited CTI intervention ends. Contact with any mental health professional within the community mental health team would lead to awareness that a prisoner had been released and may facilitate the allocation of a care co-ordinator. It is possible that allocation of a care co-ordinator and contact with a care co-ordinator could lead to contact with other professionals within the team. This may be the case where the care co-ordinator arranges an assessment or medication review with a psychiatrist or input from a psychologist or social worker.

Figure 10. Effect of CTI Manager on Contact with Mental Health Services and Allocation of Care Co-ordinator



The primary outcomes of the quantitative component focus on the contact with community mental health teams and the professionals in these units. However, the qualitative component suggests that the pattern described for community mental health services (Figure 10) is

replicated in other services that are needed by released prisoners in this period. Housing was identified as a priority in both prisoner and staff interviews and the CTI was able to assist released prisoners in attending council offices to apply for housing and then was also able to advocate for the released prisoner if the council was unresponsive (Section 8.2.2.; Section 8.2.4.). This was also the case for probation services where the CTI manager was able to assist released prisoners in understanding what was required of them, ensure that appointments were attended and to work with probation officers to ensure that a released prisoners mental health needs were considered (Section 8.2.4.).

Social exclusion and stigma, related to both mental health and to time in custody, were raised as an issue for released prisoners trying to access a range of services (Section 8.2.2.; Section 8.2.4.) and other studies of offenders with severe mental illness confirm that stigma is frequently experienced by this group (LeBel, 2012; Mezey, Youngman, Kretzschmar, & White, 2016). Support and advocacy from a CTI manager committed to collaboration and equivalence of care was seen as helpful in overcoming these barriers and highlights the benefits of this approach (Section 8.2.5.).

9.4.2. Predictors of Outcomes at Six Weeks after Release

In addition to demonstrating the effectiveness of the CTI at six week follow ups, the thesis has important findings regarding predictors of outcome for prisoners with a severe mental illness in the transition from prison to the community (Section 8.1.4.).

Prisoners who were sentenced had significantly better outcomes than those on remand for contact with any mental health professional and with a care co-ordinator. This difference was hypothesised due to the different pathways to release for these groups. Remand prisoners do not have a set date of release that can be worked to and this limits the ability of the mental health inreach team to plan for the transition whereas sentenced prisoners have a date of release and services can plan accordingly (Section 3.1.). The effect of this unplanned release was expanded on in the qualitative interviews with both prisoners and staff aware of the challenges that this posed for planning. For prisoners on remand, there was uncertainty about when they would be released and whether they would be released from court or sentenced to a further period in prison. Staff participants reported that they may not be aware of a prisoner's release for several days and prisoners relayed that they had presented at community teams and there was no awareness that they had returned to the community. This illustrates the difficulties in providing care for remand prisoners in this period. No studies have

examined the difference between remand and sentenced prisoners with relation to health outcomes but some research has suggested that the experience of remand is particularly stressful as prisoners and their families have to adapt to imprisonment and there is great uncertainty surrounding the trial verdict and sentencing (Smith, 2014). This is also reflected in the association between suicide and remand (Fazel, Cartwright, Norman-Nott, & Hawton, 2008; Humber, Webb, Piper, Appleby, & Shaw, 2013). It could then follow that remand prisoners experience more distress and their support systems are not well equipped to support them on release leading to more negative outcomes.

The qualitative interviews also pointed to other reasons for uncertainty surrounding release which were not captured in the quantitative component (Section 8.2.2.). The time between parole being granted and release is variable and having days added onto a sentence were both cited as important and in the future should be considered alongside the distinction between remand and sentenced prisoners. A caveat that should be noted is that information on probation was not recorded in this study and many of the sentenced prisoners, who had better outcomes, would have received input from probation officers. As can be seen from the qualitative component, probation officers do play a role in planning for release and it may be that this has an effect alongside the CTI intervention.

Being in contact with mental health services on entry to prison was hypothesised to be a predictor of service contact and allocation of a care co-ordinator after release due to services' awareness of imprisonment and a relatively recent history of contact with secondary mental health services in the community. However, this was not found to be the case and receiving mental health care from a GP on entry was actually significantly associated with lower levels of allocated care co-ordinators and lower levels of contact with a care co-ordinator. This finding is counter-intuitive and conflicts with the qualitative interviews where staff were clear that having a pro-active GP who was aware of a prisoner's mental health problems assisted care planning and the transition from prison to community mental health services. It is possible that there are issues related to severity and GPs have more involvement in less severe cases where the current levels of severity does not merit input from secondary mental health care services. Another possibility is that positive relationships have been built with a GP and the prisoner prefers management from this source rather than the additional input of community mental health teams. Screening positive for problematic drug use was associated with having a care co-ordinator on release. This difference was not hypothesised *a priori* and the qualitative component does not shed any light on reasons for this. It may be that there are processes

related to increased severity of illness or increased judgement of risk and further research is needed to examine this.

The qualitative component of the thesis identified additional factors that may impact outcomes on release but that were not included in the quantitative design. These were the risk presented by prisoners on release and the extent of family support (Section 8.2.2.; Section 8.2.4.). There were differing perspectives on whether low, medium or high risk prisoners would have the most positive outcomes on release. Some staff participants suggested that high risk prisoners would receive a higher standard of treatment as usual and would have more positive outcomes. However, others suggested they would fall between community and forensic mental health services and have less positive outcomes (Section 3.2.). One specific case was raised in an interview where a high risk prisoner was declined by both types of teams for not meeting their criteria and the CTI provided a framework for notifying the prison mental health inreach team and escalating this to senior management with the trust. Measuring prisoners' risk in this period would require additional resources and the definition of risk would need careful consideration (Dolan & Doyle, 2000; Fazel, Singh, Doll, & Grann, 2012) but future research could focus on this issue.

In addition, the impact of family support on outcomes during this period was highlighted (Section 8.2.2; Section 8.2.4.). Several participants and staff raised the issue of family providing housing and it was clear that this was seen as important in allowing planned contact with mental health services. This findings is supported by previous research which has found that female relatives take on the burden of responsibility for providing housing and financial support (Western et al., 2015). The design of this thesis with information collected from health records did not allow exploration of the extent and nature of family support in this period meaning that this thesis cannot provide definitive answers about how these issues impact outcomes. However, both should be investigated in further research and their impact on outcomes in this transition examined.

There are also predictors of outcomes at six weeks that were not measured and were not mentioned during the qualitative interviews that could be important. Psychiatric hospitalisation can form part of the pathway through prison and community mental health services (Doyle et al. 2014; Section 3.2.) and it possible that this has an influence on outcomes after release. If a prisoner was transferred from a psychiatric hospital to prison, particularly if this occurred soon before release, then mental health staff within the prison may be more aware of their needs and links with mental health trust staff external to the prison may also be

enhanced. However, there is a disconnect between the provision of prison mental health services and hospital and community mental health services (Section 9.8.) and this may mean that no effect is present.

9.4.3. Effectiveness of the CTI at Six and 12 Months after Release

The significant differences shown between the CTI and TAU group at six week were not replicated at six or 12 month follow up on any variable. Issues related to power to detect a difference for individual variables have been discussed (Section 8.1.5.), however, the trend being present in each variable suggests there may be a true reduction in the difference between groups at these later time points. The lack of an effect at six and 12 months has important implications for the interpretation of the effectiveness of the CTI in promoting positive outcomes past its time limited focus. The primary goal of the CTI is to improve outcomes in the transition from prison to the community and it appears that in the short term this is effective but this difference is not maintained and reasons for this should be considered.

It is possible that participants in the TAU group made contact with community mental health and other services over a longer period of time. England and Wales have well developed community health services that are supported by primary care and TAU participants may have made spontaneous contact with existing services, or over time secondary mental health services may become aware that input is needed through information from primary care services. In addition, these services are publicly provided and there is no requirement for insurance or Medicaid registration (Wenzlow, Ireys, Mann, Irvin, & Teich, 2011). This pattern has been seen in research in other settings. The reduced difference between assertive community treatment or assertive outreach and treatment as usual group in England and Wales compared to the United States of America has been put down to the strength of existing community mental health services (Burns et al., 2007; Killaspy, 2007). This type of finding has also been seen with the CTI when trialled in population that have some existing community support networks, like care from Veteran's Affairs (Kasprow and Rosenheck, 2007). Due to the low levels of follow up of TAU participants in the qualitative component this thesis is not able to shed light on the processes that lead those without CTI support to make contact over time and this would be worth exploring further.

The reduction in the differences between CTI and TAU groups at six week, and six and 12 month follow up, means careful consideration of the value of early contact with mental health services and allocation of a care co-ordinator is needed. As has been discussed, there are a

number of negative outcomes for prisoners in the transition to the community and there is a particular concern about the immediate post-release period (Section 3.3.). Suicides are highest in the month after release (Pratt et al., 2006) and drug related mortality is also a concern in this period with lowered tolerance after abstinence in prison leading to overdose (Farrell & Marsden, 2008; Merrall et al., 2010). In addition, previous qualitative studies and the qualitative results of this thesis demonstrate that the immediate post-release period is highly stressful and a time of great uncertainty for prisoners (Binswanger et al., 2011; Thomas et al., 2015; Visher et al., 2004). This study is not able to state whether early contact prevents deterioration of mental health problems and relapse, nor is it able to conclude whether improved service contact and service provision reduces the likelihood of mortality and reoffending. However, it is hypothesised that the improved outcomes found at six weeks for CTI participants would lead to an improvement on other outcomes. This has been found to be the case in studies of the CTI in other settings (Baumgartner & Herman, 2012; Herman et al., 2000; Kasprow & Rosenheck, 2007; Susser et al., 1997) and in qualitative interviews CTI participants stated that they thought it had prevented other negative outcomes and reduced the stresses of returning to the community (Section 8.2.2.). Further research is needed to address whether the improved outcomes at six weeks translated into other positive outcomes which would add weight to the case for provision of the CTI in usual practice.

9.4.4. Levels of Service Contact and Care Co-ordinator Allocation after Release

The primary and secondary outcomes of this thesis were aimed at establishing whether the CTI was effective in improving the transition period for prisoners with a severe mental illness. However, the proportion of participants who had certain outcomes is also important in its own right. In the CTI group around 75% of participants had contact with any mental health professional in the six weeks after release, for those in the TAU group this was a little over 50%. This rate of contact is higher than has been found in other studies (Lennox et al., 2012). However, for a group of released prisoners who have a diagnosis of severe mental illness, other complex needs, and are prescribed psychiatric medication at the time of release contact is important and necessary and these levels should be seen as poor. Similarly, rates of released prisoners with an allocated care co-ordinator are low at six weeks for both groups. It follows that contact with a care co-ordinator is also low at this time point. Rates of contact with mental health professionals over six and 12 months peak at below 80%. For participants in the CTI group, having an allocated care co-ordinator did not rise above 70% and contact with the care co-ordinator was capped at around 60% and these outcomes were proportionally worse for TAU participants with 58.1% and 46.9% on these outcomes respectively. It should be

concluded that treatment as usual participants have unacceptably low outcomes on these measures over the follow up period and even for CTI participants who fared significantly better at six weeks improvements still need to be made.

The qualitative component was not able to quantify contact with mental health services or allocation of a care co-ordinator in the same way as the quantitative component but the findings support each other. Prisoners were clear that they felt unsupported on release and were left to organise their own care and this was supported by prison staff who were aware that they did not have the resources to plan adequately for release. This translated into drop out from services at a time that prisoners needed supported. Although both prisoners and staff thought that the CTI would have a beneficial impact and would go a long way to improving outcomes, the quantitative results suggest that many prisoners were still left without support in this period.

9.4.5. Effectiveness of the CTI on other Health and Forensic Variables

Several of the variables recorded as secondary outcomes showed significant differences at six weeks follow up with participants in the CTI group having more favourable outcomes on a range of health service variables, including a care plan being in place, registration with a GP and prescription of medication. It is possible that the CTI had a beneficial effect in addition to the primary outcomes in this period and that the impact on improved linkage with primary as well as secondary care services translates into improved care planning and continuity of medication. Prisoners with mental health problems are likely to have physical problems that need attending to and do not tend to be registered with primary care services so an improvement in this outcome would be positive (Gatherer, Moller, & Hayton, 2005; Mallik-Kane & Visher, 2008; Pocock & Sutton, 2015). Qualitative interviews with members of staff who had completed the CTI role support the idea that the intervention can have a beneficial effect. One CTI manager saw registration with a GP as one of the easier aspects of planning and stated that the CTI had given them the time to ensure this was in place. This CTI manager also made the link between registration with a GP and continuity of medication prescription and thought that at present GPs take on a significant burden of responsibility while links to community mental health services are made.

A significantly higher proportion of CTI participants had returned to prison within six weeks of release and this difference was not anticipated at the onset of the study. It was hypothesised that input from the CTI and improved contact with services would reduce reoffending and that

this would translate into fewer participants in the CTI arm returning to prison across the follow up time points. This finding is consistent with literature relating to assertive community treatment or assertive outreach in the USA where higher intensity interventions have been linked to more frequent return to prison (Solomon & Draine, 1995). No information was recorded on the number or nature of new offences and parole violations that led to return to prison so limited conclusions can be made but it is possible that involvement of the CTI manager and improved linkage with community mental health and probation services meant that services were more aware of CTI participants and were able to detect violations of probation conditions more effectively. In addition, an issue that was not captured in the qualitative component of the trial but anecdotal evidence gained from CTI managers in the trial may also shed light on this increased return to prison. In several cases, a CTI manager became aware of outstanding charges against a participant and advised them to attend a police station to answer these charges. This in turn led to participants to again be remanded to prison.

A current focus of health services working within the criminal justice system are to prevent offenders with mental illness from entering custody by providing liaison and diversion services early in the offender pathway (Section 3.2.) and the finding that providing additional support during transition to the community increases return to prison is concerning. Prison may be particularly damaging to those with mental health problems (Section 2.1.; Section 3.4.) and current difficulties in England and Wales present challenges to providing treatment in this environment (Section 2.4.). In addition, if there is a perceived link between contact with services and increased monitoring and sanctions from probation services then there may be understandable reluctance from prisoners to engage with interventions, such as the C TI, and wider mental health services. Due to these issues, ncreased return to prison represents a detrimental and unintended consequence which needs to be considered if the CTI is to be implemented more widely (Section 9.10).

9.4.6. Provision and Organisation of Care in the Transition from Prison to the Community

The findings of the qualitative component are discussed together with the quantitative findings above. However, there are also themes from the qualitative results that merit interpretation on their own. These themes emerged from prisoner and staff interviews when analysed together and were not specifically targeted by the topic guide (Section 8.2.5.).

Prisoners and staff discussed the contrast between loss of control in prison and responsibility in the community and indicated that prisoners are required to adjust to their new situation too rapidly. The prison system relies on routine and compliance and prisoners have few opportunities to exercise personal choice and responsibility with prisoners at some prisons, including at thesis sites, held in cells for 23 hours a day. However, after release prisoners are expected to attend to a range of needs and are largely left to their own devices. Prisoners indicated that on just the first day in the community it may be left to them to travel to or even arrange accommodation, meet with a probation officer and initiate processes that would reduce the delay to receiving benefits. These findings are in line with previous literature and participants from qualitative samples in the USA also describe the contrast between prison and the community (Chavira et al., 2016; Visher et al., 2004). This sudden change may explain why outcomes related to contact are poor, with prisoners left to negotiate complex healthcare systems and the additional support provided by the Critical Time Intervention can help reduce the starkness of this change.

There was also a focus on patients' involvement with mental health services and the extent of collaboration in decision making. This is an issue in mental health services more generally (Foot et al., 2014) but prisoners indicated that it was a particular problem in prison where time pressure was evident and contacts with professionals in the mental health inreach team were rushed. In addition, prisoners thought that a lot of planning took place behind the scenes and they were not kept aware of which services would be involved and what their role would be. In other settings, patient involvement and collaboration has been found to increase levels of empowerment for patients with mental health problems (Tambuyzer & Van Audenhove, 2015) and it has also been found to be associated with improved treatment adherence (Thompson & McCabe, 2012). Both of these outcomes would be beneficial for prisoners with severe mental illness in the transition from prison to the community alongside the intrinsic value of patients' involvement in their own care.

Personal relationships in care were also identified as a theme in the qualitative component and it was evident that this was seen as important across the transition from prison to the community for a number of reasons. Prisoners stated that they valued the personal relationship that was built up with members of staff and they thought that interacting with these staff was easier than when new relationships had to be found. Staff also supported this view and thought that the human element of having someone you know support you in a stressful period was important for prisoners. The continuation of personal relationships was also seen as important because of the knowledge of prisoners that is built up during their time

in custody. In this thesis, CTI managers were embedded within prison mental health teams and staff relayed that due to this transferring this knowledge to CTI managers was easier than to community mental health teams. Prisoners were also aware of this dynamic and stated that the process of release worked best when someone they already had a personal relationship with was involved. In some cases, this was the CTI manager but prisoners also acknowledged the role of GPs or members of the CMHT who knew them well in ensuring a smooth transition to the community. The consistency of relationships with a clinician has been raised elsewhere as important to continuity and during a transition between services this is often lost (Freeman & Hughes, 2010). Some members of staff also talked about their own experiences of personal relationships in the provision of care and the effect of positive and negatives relationships with staff working in other services. Whilst this issue is outside the scope of the thesis, poor relationships between and within health services and a lack of organisational support may lead to poor care and should be examined further (Maben, Peccei, Adams, & Robert, 2012).

The fragmentation of services that provide care to prisoners with severe mental illness in the transition from prison to the community was raised mostly by staff and was seen as problematic for planning for care after release. Although prison health services were brought into the NHS in the 2000s (Section 2.2.; Section 2.3.), there is still a division between prison and community health services and staff mentioned this frequently in qualitative interviews. In addition, there are a number of different agencies and services that need to work together to ensure a comprehensive plan for transition is in place. The fragmentation and separation of these services meant that communication was problematic and the limits of confidentiality regarding prisoners' information was not clear. This was exacerbated by the lack of shared information systems and there were concerns about data protection and the transfer of information through unsecure means. Differing responsibilities and competition between services were also raised as issues that affected planning in this period and this was particularly the case where private bodies provided services. Fragmentation within services that provide care for prisoners with severe mental illness in the transition from prison to the community is not set to reduce with private rehabilitation companies tendering for probation (Ministry of Justice, 2013a). Interventions may be needed to ensure coordination and linkage of services and the CTI was seen as a way of doing this. In at least one case, the CTI intervention resolved a situation which presented a great deal of risk where the Care Programme Approach (CPA) and a multi-agency public protection arrangement (MAPPA) had failed.

9.5. Methodological Considerations for the Quantitative Component

9.5.1. Trial Design and Randomisation

Randomised controlled trials (RCTs) are widely recognised as having high levels of internal validity and are seen as the most reliable method of determining the effectiveness of interventions in health services and other settings (Barnard, Dent, & Cook, 2010). Randomisation is the most effective method of controlling for factors that could have a confounding effect on outcomes and preventing bias. In this trial, randomisation was completed by a Clinical Trials Unit and the stratified approach meant that the outcome of randomisation could not be pre-empted by researchers. Whilst RCTs have high levels of internal validity, they can be limited by poor external validity (Paul et al., 2015; Rothwell, 2010) and this should be considered in the design of these type of trials (Section 9.5.2.).

9.5.2. Internal and External Validity

The internal and external validity of the trial should be considered and will be assessed as part of quality assessments by others. Internal validity relates to the risk of systematic bias or error within the trial and external validity relates to the extent that findings can be applied outside of this particular piece of research (Martin & Bridgmon, 2012).

Internal Validity

Selection Bias

The randomisation approach that was used minimised the risk of selection bias in the trial as allocation was concealed. The success of this approach in limiting selection bias is shown by the similarity of the CTI and TAU group with few significant differences at baseline. The thesis used an intention to treat approach and retained all randomised participants in their original groups during analysis. This approach is recommended for trials to ensure that bias is not introduced as those who drop out of treatment may be different to participants who complete the treatment as intended (Jüni, Altman, & Egger, 2001; White, Horton, Carpenter, & Pocock, 2011). Intention to treat may give a conservative estimate of treatment effects (Gupta, 2011); however, fidelity in this trial was acceptable (Section 8.1.3.) and this approach gives a realistic assessment of the effect of the intervention under real life conditions where treatment will not always be accepted or completed.

Detection Bias

Detection bias can occur when a researcher is aware of a participant's treatment allocation and this knowledge can influence the assessment of outcome variables (Jüni et al., 2001). In this trial, it was not possible to blind the researcher to participants' treatment allocation (Section 7.1.4.) so detection bias was possible and the results should be seen in the context of this limitation. The outcomes used in the study were clearly operationalised and the objective measure of contact with relevant mental health professionals may not be as at risk as more subjective measures.

External Validity

Generalisability of Results

There are several issues to consider concerning the generalisability of the results of this thesis. The eligibility criteria were pragmatic and allowed comorbid physical and psychiatric conditions and substance misuse, but all participants had diagnoses of severe mental illness (Section 7.1.3.). As previously discussed (Section 2.3.), mental health inreach teams manage a number of prisoners without severe mental illness on their caseload (Hopkin, Samele, Singh, & Forrester, in press) and the results of this study may not relate to outcomes for prisoners managed for other reasons. In addition, due to restraints related to research governance prisoners were only recruited if they were set to be released to certain geographical areas covered by certain NHS trusts. These trusts tended to be in close vicinity to the prisons and prisoners released to further afield areas may have different needs and problems. As can be seen in the trial CONSORT flow diagram (Section 8.1.1), 335 prisoners were excluded due to this and would form a large percentage of people managed by the CTI if it was implemented as a routine service.

The project intended to recruit equal numbers of prisoners from London and the North West but due to problems with recruitment, the majority of prisoners were recruited from the four London prison sites (Section 8.1.1.). These prisoners would all have been released to high density urban areas and the results may not be generalisable to rural areas or cities with different characteristics to London.

All prisoners included in the study were men between the ages of 18 and 67 (Section 8.1.2.), however, the CTI may also be beneficial to other groups of prisoners with mental health

problems. Female prisoners have different needs to male prisoners (Doherty, Forrester, Brazil, & Flora, 2014; Johnson et al., 2014) as do young offenders (Aalsma et al., 2015) and the CTI may need modifying to allow consideration of this. Further research would be needed in these populations to determine if outcomes of adult male prisoners could be replicated.

Choice of Control Group

The control group chosen in this trial was naturalistic and reflected the treatment received by prisoners in the included sites before and after the research project and at other sites across the prison estate. The control group received treatment as usual and there was no restriction on the type of care they could receive during the transition. This should improve the generalisability of the trial (Boutron, 2008) and as has been discussed, existing services may have reduced the effect of the CTI over time (Section 9.4.3.) allowing a realistic assessment of its effectiveness in practice.

9.5.3. Lack of Statistical Power (Type II Error)

Type II errors occur when a non-significant result is obtained and the null hypothesis is wrongly accepted (Freiman, Chalmers, Smith, & Kuebler, 1978; Perneger, 1998). Due to recruitment problems, the study recruited 50 less participants than initial power calculations planned for and the numbers analysed at follow up were lower than anticipated. Whilst significant results were found, it is possible that the trial was underpowered and other null findings were subject to Type II error and for this reason *post hoc* power calculations and a consideration of their effect were included in the results (Section 8.1.4.) and discussion (Section 9.4.3.).

Widespread under recruitment into trials in mental health has been documented (Campbell et al., 2007; Leeson & Tyrer, 2013) and this study followed this trend. Researchers planning studies in prison should be realistic about the constrictions of the prison environment and should be aware of reasons that recruitment may be lower than anticipated. Leeson and Tyrer (2013) cite the complexities of research approval and governance as a barrier to recruitment and due to the arrangement of prison healthcare and the lack of cohesion between the geographical catchment areas of prisons and health services several approvals will need to be gained for recruitment to proceed. Difficulties in acquiring local NHS approval were encountered in this project and should be considered in the planning of future research.

9.6. Methodological Considerations for the Qualitative Component

9.6.1. Recruitment and Loss to Follow Up

Recruitment for the qualitative study was lower than anticipated (Section 7.3.1.; Section 8.2.1.) and this has implications for saturation. The sample is homogenous, with all participants being prisoners with severe mental illness, and themes identified from the whole sample meet the 12 participants suggested for saturation by Guest, Bunce & Johnson (2006). Themes relating to the perceived benefits and problems with the CTI were derived from fewer participants due to problems with recruiting participants after release. The qualitative results should be seen in this context but the identified themes clearly demonstrate that new information could be obtained from this sample size (O'Reilly & Parker, 2012) and this is also an important aspect of saturation (Fusch & Ness, 2015). As with prisoners, recruitment for staff was lower than anticipated (Section 7.3.3; Section 8.2.3.). Saturation has been found with as low as six participants (Guest et al., 2006) and this sample exceeds this number. In addition, the findings of the prisoner and staff samples corroborated each other and this lends weight to the findings. The results should, therefore, be interpreted with caution with the small sample in mind.

The design of the qualitative aspect of this thesis intended to interview prisoners before release and then to follow them up after release to provide insights on the release process and the benefits of the CTI. The majority of prisoners were not available for the post-release interviews due to them not being contactable or refusing to complete the follow up interview. Those who did complete the follow up interview were in the CTI arm and were followed up with help from the CTI manager who could provide up to date contact details. This loss to follow up may have influenced results and it may be that prisoners who had a positive experience of the CTI were willing to take part and other perspectives were missed. Future studies that use this methodology would need to give thought to how follow up numbers could be maximised and whether more researcher time would need to dedicated to contacting participants after release.

9.6.2. Risk of Bias in the Qualitative Sample

A sub sample of participants from the overall study were recruited for the qualitative component and purposive sampling was used to ensure that CTI and TAU participants were

included. The 14 participants recruited to the qualitative component indicated that they would be interested at initial recruitment and then consented to take part when approached around six weeks before release. Due to this it is possible that these participants are different from the sample as a whole and that their perspectives are different from those who weren't interested or refused when approached. The characteristics of the qualitative sample are broadly similar to that of the full sample (Section 8.2.1.), but they may differ on aspects that weren't recorded and it is difficult to determine whether this is the case. For example, those who refused to take part in an interview before release may have been more stressed about returning to the community. Conversely, those who agreed to take part may have been more stressed and wished to talk about these issues with a researcher who was working alongside the mental health inreach team.

In addition, prison and community staff were selected by identifying staff with differing roles who worked with prisoners with severe mental illness. A number of members of staff did not respond to emails about participation and this was a particular problem for staff based at community mental health teams. It is possible that only staff who were interested in the transition from prison to the community or particularly committed to the outcomes of prisoners on release agreed to take part. If this was the case, other staff may have spoken about different issues and other themes may have been derived from the interviews. An example of this is that during the qualitative interviews with staff, the challenges of working with prisoners were acknowledged but this was framed in a non-judgemental way. During interactions with staff who did not take part in the qualitative component, there was a sense that prisoners are to blame or at fault for negative outcomes on release. This perspective was not captured and may have enhanced the interpretation of issues in the transition from prison to the community.

9.6.3. Problems Related to Recording Interviews

Due to the nature of security arrangements within prisons, use of recording equipment is understandably restricted. There is scope for these rules to be waived and it is sometimes possible for researchers to gain permission to use dictation equipment (Samele et al., 2016). However, our experience was that this was not possible. At one London site, permission for other researchers conducting qualitative interviews with staff was withdrawn midway through the project and at two other London sites, prison keys were never obtained and the researchers were classified as visitors which would rule out gaining these permissions.

As dictation equipment could not be used most of the pre-release qualitative interviews with prisoners were hand transcribed at the time of interview and then typed up as soon as possible on computers in the prison mental health inreach team offices. This was also the case for one member of prison staff who completed the interview in the health care centre of a prison site.

Care was taken to ensure that the pace of the interview did not limit the written notes that could be made during the interview, however, the wording of participants' testimonies will not be as exact as a transcription of an audio recording. Pauses while the researcher wrote sometimes elicited further responses from the participant, but sometimes the flow of the interview was lost and managing the interview, making prompts and asking further questions while hand recording information proved difficult. The thematic analysis that was used in this thesis can accommodate this lack of precision, however, it would prevent other methods of analysis and some types of research being conducted.

9.6.4. Interview Locations and Time Restrictions

The prison milieu and its effect on limiting the quality of interactions between prison mental health staff and prisoners has been described (Section 2.4.) and this also had an effect on the qualitative aspect of this thesis. Interviews were conducted in rooms off the main wing areas where conditions were noisy and interruptions by other staff looking for space were common. This may have had an effect on the willingness of participants to talk about sensitive issues and also sometimes interrupted the flow of an interview. In addition, the prison sites that were used had restrictions on the amount of time that a prisoner could spend out of their cell and this affected the time that could be spent on qualitative interviews. In this time, other tasks have to be completed and meals collected and so the time that can be taken for a qualitative interview is limited.

9.6.5. Restrictions on Staff Time

A larger number of staff interviews than could be completed were planned and this was mainly due to the availability of staff and the time pressures that mental health teams face. Several prison and community psychiatrists indicated that they would be interested in taking part in the qualitative research but were not able to commit time to completing this. A number of prison mental health nurses from sites that were not involved in the study were approached for a more distant view of the intervention but similarly were not able to commit to coming

away from their prison site. Indeed, one of the completed staff interviews was shorter than intended as it had to be fit in between their University lectures.

9.7. Ethical Considerations in the Trial

Some of the worst violations of moral and ethical imperatives have occurred in prison settings (Elger, 2008; Gostin, Vanchieri, & Pope, 2007) and there are several ethical considerations that need to be made when conducting research with this group. Due their imprisonment, prisoners' liberty and autonomy is restricted and care is needed to ensure that the principle of voluntariness is not undermined. When prisoners were approached for the purposes of this thesis, it was made clear that the study was voluntary and that participants were free to withdraw consent at any time without this having any negative effect.

Due to the semi-structured and open nature of qualitative interviews and some quantitative measures, participants may have discussed issues related to harm or risk that the measures were not intended to elicit. All participants were made aware of the boundaries of confidentiality at the outset and were told that the contents of the interview would not be usually shared with prison staff unless issues related to harm or risked were raised (Elger, Handtke, & Wangmo, 2015). In situations where confidentiality needed to be waived, the participant was made aware and the appropriate course of action was discussed with prison mental health staff.

In recent years the focus on equivalence of care for prisoners has come to the fore (Exworthy, Wilson, & Forrester, 2011; Exworthy, Samele, Urquía, & Forrester, 2012; Wilson, 2004) and there has been a parallel focus on the rights of prisoners and other hard to reach groups to take part in research to improve provision of care and to further understanding about their situation (Bonevski et al., 2014). This thesis describes research which conformed to the aim of beneficence and along with the focus on prisoners' rights during the study, concerns about autonomy and coercion should be assuaged. The qualitative component was also an opportunity for prisoners and staff to voice their opinions about prison and community services, the usual release process and the thesis interventions and this is rarely afforded to prisoners who can have little control over their situation (Muessig et al., 2016).

9.8. Lessons for Conducting Health Service Research in Prison

A number of lessons can be taken from this project and can inform future health research in the prison setting.

The arrangement of prison health services, with tendering and subcontracting commonplace, mean that research and governance clearances can be unwieldy and involve many layers of partners. This has implications for the time and resources needed to gain approval and this should be considered when planning mental health research in prison. There is also disconnect between prisons' location and geographical catchment area and the provision of health care services. For example, at the time of submission HMP Brixton's secondary mental health care was provided by Barnet, Enfield and Haringey Mental Health NHS Trust (Barnet Enfield and Haringey Mental Health NHS Trust, 2016) but the majority of prisoners were released to areas of South London covered by South London and Maudsley NHS Trust. Similarly, South London and the Maudsley NHS Trust provide secondary mental health care services in HMP Wandsworth (South London and Maudsley NHS Trust, 2016b) but the majority of these prisoners will be released to areas covered by South West London and St George's Mental Health NHS Trust. This adds further complications in terms of planning research, particularly for follow up after release, and should be considered. The retendering of prison health services also poses problems for prison health research and for long term projects to continue the support of new providers would be needed and this would need to be prearranged to ensure continuation of recruitment at the handover of services.

A number of practical problems were also encountered that should be considered when prison research is conducted. There was a great deal of variability between prisons in the availability of escort services, suitable interview facilities and protocols for assisting research. In two study sites, the researcher was not able to obtain keys and relied on escort to gain access to the prison and to see participants. In other sites, interviews had to be conducted in store cupboards or quiet areas of the wing landings. These conditions create difficulties in conducting research and future research should consider how these problems can be avoided or dealt with.

The trial experienced difficulties in recruiting participants and there are a number of things that can be taken from this. A large number of prisoners held on the mental health inreach team caseload were not eligible for inclusion into the study for reasons outlined in the CONSORT flow diagram (Section 8.1.1.). Careful consideration of prospective numbers is

needed prior to the initiation of trials and a focus is needed on not just the size of prison and mental health inreach team caseload but also the number held for reasons other than having a severe mental illness and the size of catchment area.

9.9. Future Directions

This trial of the effectiveness of the CTI for prisoners with a severe mental illness was the first of its kind in the United Kingdom. In addition, the systematic review of trials of other interventions in the transition period (Section 4.2.) demonstrates that research into improving outcomes for prisoners with mental health problems returning to the community is sparse and where available is largely limited to the USA. More evidence is needed about the effectiveness of the approach. As mentioned above (Section 9.4.2.), the results of this thesis may not be generalisable to other prison populations and trials of its effectiveness with female prisoners and young offenders may be useful. There are also specific populations within the adult male population, for example older prisoners, who have distinct needs (Forsyth et al., 2014) and may also benefit from the intervention and further work in this direction could be completed. At the time of submission, the CTI was being provided as a service at one thesis site and evaluating the CTI outside of a research setting would be useful to assess whether a high level of fidelity is adhered to and whether the intervention is subject to a change in case load or case mix. This could have an impact on whether the CTI is as effective as a service compared to in research (Fixsen, Blase, Naoom, & Wallace, 2009; Fixsen, Scott, Blase, Naoom, & Wagar, 2011). It is possible that the 'mission creep' that has occurred with mental health inreach teams (Section 2.3.) would apply to the CTI with the removal of strict eligibility criteria regarding diagnosis and adjustments may need to be made to the model to account for this. For example, prisoners with attention deficit disorder may need more of a focus on linkage with primary care and psychological therapy services rather than to secondary mental health care services. In addition, prisoners may be released to a wider geographical area and the impact of this on the CTI managers' work would need assessing.

As discussed earlier, this study is not able to conclude whether improved access to mental health services within six weeks of release has a beneficial impact on other negative outcomes like mortality, however, contact with mental health services may mean that issues related to risk or harm can be assessed and managed (Section 9.3.3.). Future research could focus on this issue. A prospective assessment of prisoners' mental health before release and after some time in the community may be able to determine whether early contact with community services is beneficial in preventing deterioration either due to increased social support or

continuity of medication. This type of method could also investigate whether early contact with services improves outcomes related to drug and alcohol abuse and other risky behaviour.

In addition, large scale projects using linkage of databases would be informative in further outlining issues related to the transition from prison to the community for this group of prisoners. Access to the police national computer and offender management systems would allow more definitive answers to be made about the link between promoting contact with mental health services, monitoring by criminal justice agencies and return to prison (Section 9.4.5.). More extensive information on primary care and hospital episodes would also be useful to examine whether provision of interventions aimed at the transition from prison to the community has an effect on how other health care services are accessed and information on homicide, suicide, and all-cause mortality would help to further examine whether intervention can prevent these highly negative outcomes.

This study used contact with mental health professionals and allocation of a care co-ordinator by community mental health services as its primary outcome measures. These outcomes relate to engagement and continuity but do not fully reflect the complexity of these concepts (Section 5.1.; Section 5.2.). It is possible that released prisoners were making contact with services but the content of sessions was adversarial and unproductive and so this outcomes does not adequately assess engagement. Similarly, having an allocated care co-ordinator hints at continuity of care but does not capture issues such a continuity of information and care planning. It would, therefore be useful to use more comprehensive psychometric measures of engagement and continuity such as the Treatment Engagement Rating Scale (Drieschner & Boomsma, 2008) and CONTINU-UM (Rose et al., 2009) to gain a more accurate account. This may also shed light on whether early contact is beneficial with the prevention of gaps in care improving the relationship between service providers and released prisoners.

9.10. Implications for Policy and Practice

The CTI has been shown to be effective on several outcomes at six weeks after release and was supported by staff and prisoners but if it was to be implemented concerns about increased return to prison would need to be addressed. In addition, staff raised doubts about whether it could be funded and who would take responsibility for this. A consideration of the implications of the results of this thesis need to be considered and an ecological model can be applied to examine this (Dopfer, Foster, & Potts, 2004; Kapiriri, Norheim, & Martin, 2007). The macro levels refers to society as a whole and national or international level systems. The meso

level refers to mid-range systems and in the context of health and prison services this could apply to clinical commissioning groups or individual prisons. The individual level refers to interactions between individual clinicians and prisoners or patients and the small scale groups which make up family or other social support networks.

9.10.1. At the Macro Level

During the 1990s and early 2000s there were a series of national policy reports on the quality of health care in prison and the need for improvements in the provision of mental health care (Section 2.2.; Section 2.3.). The introduction of mental health inreach teams has been a positive step and they have become well established in the prison system, however, a renewed focus on prison mental health care and particularly on planning for release is needed. Mental health inreach teams were originally envisaged to provide discharge planning but the ability of prison based health services to plan for the transition to the community is limited and resources are dominated by assessment of referrals and the management of current prisoners (Brooker & Gojkovic, 2009; Brooker et al., 2005).

Policymakers should review provision for prisoners with severe mental illness in the transition to the community and assess whether interventions, such as the CTI, that can bridge the divide between prison and community services are more effective than the current approach. There are a large number of agencies responsible for providing care in the transition from prison to the community and potential benefits are spread across services. Due to this fragmentation of services, it is possible that these changes will be most effective if implemented at the national level and supported by Government and joint Ministry of Justice and Department of Health initiatives as has been the case with previous developments (Section 2.2.; Section 2.3.).

Few interventions for improving outcomes in this period have been evaluated in the international context and where evidence exists its quality is variable (Section 4.2.). This thesis presents the first large scale evaluation of an intervention for improving the transitions for this population in the prison system in England and Wales and the CTI should be given serious consideration by decision makers at the national level. The CTI was welcomed by professionals in a range of role both in prison and in the community and was seen as a necessary addition to ensure that the mental health of prisoners received consideration from those with expertise in this area. Prisoners who received the CTI were clear that they thought it had been beneficial and prisoners who did not receive it were keen to see this approach used. It proved to be effective in improving contact with community mental health professionals and increasing

appropriate provision of care from the perspective of services in the period immediately following release where serious negative outcomes are known to occur (Section 3.3.). This thesis is not able to shed light on whether the findings described above prevent deterioration of mental health, hospitalisation or reoffending and further research would be needed to support these hypotheses. However, the NHS has strong commitments to equivalence of care for prisoners and even without evidence to support these additional outcomes, interventions, such as the CTI, would help to reduce to disparity in care that occurs in this transition compared to community and inpatient groups.

There is currently a national policy focus on rehabilitation and the privatisation of tendering of probation for low and medium risk offenders (Ministry of Justice, 2013a, 2013b, 2013c) and the results of this thesis suggest that the focus on probation is not sufficient and an additional focus on mental health service provision is required. Current probation arrangements cannot be said to be effective in providing access to mental health services after release as outcomes for prisoners with severe mental illness are poor (Lennox et al., 2012) and results of the qualitative component suggest that probation officers are not equipped to negotiate the processes involved in ensuring provision of mental health care in the community. Furthermore, fragmentation of services is already a concern with multiple agencies working together and the addition of additional private probation providers was not seen as helpful by prison or community staff.

9.10.2. At the Meso Level

National initiatives to improve the outcomes of prisoners with severe mental illness in the transition from prison to the community may be helpful, but the independence of clinical commissioning groups (CCG) means they could fund interventions at a local level when the issues raised in this thesis are recognised in their local area. This may be particularly true for Category B prisons in urban areas where prisoners return to areas near the prison. For more mixed urban and rural areas where prisoners return to a wide geographical area and greater number of CCG areas the dilution of population requiring intervention may reduce the likelihood of provision. This difficulty is being found with other areas of expertise where groups of service users are small and spread thinly through a number of CCGs (Agrawal, Fleminger, Ring, & Deb, 2008; Bhattacharya, Rickards, & Agrawal, 2015; Russell et al., 2013) and higher level initiatives may be required.

Remand prisoners were less likely to make contact with mental health professionals after release (Section 8.1.4.) and difficulties relating to the unpredictability of release and lack of formal processes for notification were raised in qualitative interviews (Section 8.2.2.; Section 8.2.4.). Meso level bodies may be able to resolve these issues and it would be beneficial if there was more cohesion within the prison and a more streamlined system for notification of outcome from courts to prison and health and other services within the prison. In the case of release, this would allow mental health inreach teams to notify relevant community services in a timelier manner and this may improve outcomes in the absence of the CTI or a similar intervention. This may well be best done locally with differing relationships between Magistrates and Crown courts and prisons across the country.

9.10.3. At the Individual Level

At an individual level, this trial provides pertinent information for clinicians in their everyday interactions and highlights a number of issues that should be considered when planning for the transition from prison to the community for prisoners with severe mental illness and other mental health conditions. The qualitative component of this thesis, in particular, raises a number of issues that have not widely been discussed in prison literature. Prisoners described a number of needs that closely matched with the needs that staff also identified and both prisoners and staff were aware of the difficulties in providing for these needs. In general, clinicians planning for release of prisoners with severe mental illness should be aware of issues relating to housing, mental and physical health, drug and alcohol and finances and employment.

There also needs to be a consideration of the realities of returning to the community and the multitude of tasks that need to be completed, sometimes leading to differences in the priorities of released prisoners and services. The findings suggested that networks outside of the immediate health and other services were underused and that there should be more focus on the involvement of family and prisoners corroborated the importance of this in successful outcomes on release, particularly with housing.

Staff participants included in the qualitative component of the study seemed committed to equivalence of care for prisoners with mental health problems but they were aware that this approach was not universal and recognised that stigma and social exclusion were a barrier to access to services for prisoners. Staff working in prisons should be aware of this issue and should be mindful that advocacy for prisoners set to leave prison may be needed and released

prisoners should be made aware of their right to access services. This can be achieved regardless of whether the CTI is implemented.

9.10.4. Adaptations to the Critical Time Intervention

The focus of the CTI in this thesis was on improving linkage with community health services and addressing issues with individual released prisoners but stronger links with criminal justice agencies may be needed as part of the intervention. Links between mental health and probation teams are already established but are mostly *ad hoc* in nature and the CTI role could provide a vehicle for mental health expertise to be provided to probation services with the aim of reducing recall to prison in favour of other community based strategies where possible. Similarly, the CTI manager could develop links with liaison and diversion services based in police stations, and Magistrate and Crown courts, to ensure that if new offences are committed then attempts are made to avoid a return to custody so that assistance in the community can continue to be pursued.

The emphasis of the CTI is on ensuring continuity of care and promotion of engagement with services and there is a need to provide individual CTI managers with clearer guidance about the aim of the CTI and their role. Whilst health professionals have a duty to take action for the prevention and detection of serious crimes and to prevent harm to self and others (GMC CITE), returning to prison is not in a released prisoner's best interests and actions that could precipitate this should not be taken without careful consideration. If action is needed to prevent harm then the CTI manager's role could also provide for linkage with appropriate legal assistance to ensure that a released prisoner's rights are advocated for correctly.

These adaptations which place more awareness on return to prison as a possible unintended consequence of wider implementation of the CTI (Section 9.4.5.) would enhance the intervention and ensure that it is beneficial for this population.

9.11. Conclusion

Previous research has demonstrated that the prevalence of mental health conditions in general and severe mental illness in particular are high in prison populations across the world. In England and Wales, prison mental health services have become well established and are able to manage prisoners with severe mental illness whilst they are in custody. Despite this, the provision of care during the transition from prison to the community remains problematic

and it is known that in the period after release, there are a number of negative outcomes. These outcomes range from loss of contact with services, to high rates of reoffending and in the worst cases mortality through suicide, drug overdose or other causes. There is some existing evidence that interventions aimed at the transition from prison to the community can improve outcomes and this has been found to be the case in other settings, particularly in discharge from inpatient units. However, evidence in the prison setting is limited by the lack of high quality studies and randomised controlled trials.

This thesis demonstrates that the Critical Time Intervention (CTI) is beneficial in improving outcomes of prisoners with severe mental illness in the early transition from prison to the community. Although differences were not found at later follow up points, at six weeks after release prisoners who received the CTI had improved contact with mental health services and a higher proportion had an allocated care co-ordinator indicating that community mental health teams were responding appropriately to their return to the community. Further research is needed to determine whether these outcomes translate into reductions of other negative outcomes but regardless of this, the CTI has been shown to help fulfil the commitments of health services to those leaving the prison system and the principle of equivalence for patients in the Criminal Justice System. Policy and decision makers at both the macro and meso level should be aware of these findings and the CTI should be considered as a method of improving care in this transition. If implemented the CTI should continue to be evaluated to determine its effectiveness as a service and its ongoing impact.

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Appendix I

1) Search Terms for Systematic Review
2) Subject Headings for Systematic Review
3) Search Strategy for Grey Literature Databases
4) Screening Criteria Flowchart for Systematic Review

1) SEARCH TERMS FOR SYSTEMATIC REVIEW – ALL DATABASES

Population Terms (Mental Illness):

"mental*"
"severe mental illness"
"SMI"
"severe and persistent mental illness"
"serious mental illness"
"schizo*"
"depressi*"
"bipolar"
"psychiat*"
"psychos*"
"psychot*"
"patient*"
"service user*"
"client*"
"diagnos*"

Population Terms (Prisoners):

"prison*"
"*offend*"
"remand*"
"sentence*"
"*detain*"
"*criminal*"
"*convict*"
"*felon*"
"(pre- OR pre OR under- OR under) trial"
"jail*"
"gaol*"
"detention"
"correction*"
"forensic"

Population Terms (Released):
"re-entry OR reentry"
"release*"
"reintegrat* OR re-integrat*"
"transition"
"supervis*"
"discharg*"
"bail*"
"probation*"
"parole*
"resettle*"

Design Terms:

"(randomised OR randomized) controlled trial"
"(randomised OR randomized) control trial"
"(randomised OR randomized) clinical trial"
"random*"
"control*"
"RCT"
"pragmatic trial"
"controlled trial"
"control trial"
"proof of (concept OR principle) trial"
"control group"
"quasi*"
"quasi experiment*"
"non-randomised OR non randomised OR non-randomized OR non randomized"
"cohort study"
"case-control OR case control"
"case-series OR case series"
"pilot"
"prospective"
"longitudinal"

Intervention Terms:

"program*"
"programme*"
"treat*"
"therap*"
"(case OR care) management"
"(case OR care) AND (coordination OR co-ordination)"
"psychosocial OR psycho-social"
"intervention*"
"discharge plan*"
"care plan*"
"(pre OR pre-) discharge"
"(post OR post-) discharge"
"community"

2) SUBJECT HEADINGS FOR SYSTEMATIC REVIEW

OVID SEARCHES

SYSTEMATIC REVIEW – PSYCINFO

Population Terms (Mental Illness):

exp Psychiatric Patients/
exp Mental Disorders/
exp Mental Health/

Population Terms (Prisoners):

exp Prisoners/
exp Prison/
exp Mentally Ill Offenders/

Population Terms (Released):

exp Criminal Rehabilitation/
exp Parole/
exp Probation/
exp Institutional Release/
exp Facility Discharge/

Design Terms:

exp Clinical Trials/
exp Treatment Effectiveness Evaluation/
exp Mental Health Program Evaluation/

Intervention Terms:

exp Treatment/
exp Discharge Planning/
exp Case Management/
exp Mental Health Services/

SYSTEMATIC REVIEW – EMBASE

Population Terms (Mental Illness):

exp Mental Patient/
exp Mental Disease/
exp Mental Health/

Population Terms (Prisoners):

exp Prison/
exp Prisoner/

Population Terms (Released):

exp Rehabilitation/
exp Community Reintegration/

Design Terms:

exp Controlled Clinical Trial/
exp Clinical Trial/
exp Controlled Study/
exp Randomized Controlled Trial/

Intervention Terms:

exp Psychiatric Treatment/
exp Prison Nursing/
exp Patient Care Planning/
exp Mental Health Service/

SYSTEMATIC REVIEW – MEDLINE

Population Terms (Mental Illness):

exp Mental Disorders/
exp Mental Health/
exp Mentally Ill Persons/

Population Terms (Prisoners):

exp Prisoners/
exp Prison/

Population Terms (Released):

NO APPROPRIATE

Design Terms:

Exp Clinical Trial/
Exp Treatment Outcome/

Intervention Terms:

Exp Therapeutics/
Exp Patient Care Planning/
Exp Mental Health Services/

EBSCOHOST SEARCHES

SYSTEMATIC REVIEW – CINAHL

Population Terms (Mental Illness):

(MH “Psychiatric Patients+”)
(MH “Mental Disorders+”)

Population Terms (Prisoners):

(MH “Mentally Ill Offenders”)
(MH “Correctional Facilities”)
(MH “Prisoners”)

Population Terms (Released):

(MH “Probation”)

Design Terms:

(MH “Clinical Trials+”)
(MH “Randomized Controlled Trials”)

Intervention Terms:

(MH “Community Health Services+”)
(MH “Patient Care+”)

PROQUEST SEARCHES

SYSTEMATIC REVIEW – British Nursing Index

Population Terms (Mental Illness):

SU.EXACT.EXPLODE("Psychiatric Disorders")
SU.EXACT.EXPLODE("Mental Health")
SU.EXACT.EXPLODE("Psychiatric Patients")

Population Terms (Prisoners):

SU.EXACT.EXPLODE("Prison Nursing")
SU.EXACT.EXPLODE("Prison Health Services")
SU.EXACT.EXPLODE("Mentally Disordered Offenders")

Population Terms (Released):

NO APPROPRIATE

Design Terms:

SU.EXACT.EXPLODE("Research Methods")

Intervention Terms:

SU.EXACT.EXPLODE("Community Psychiatric Nursing")
SU.EXACT.EXPLODE("1:Mental Health ")
SU.EXACT.EXPLODE("Community Health Services")
SU.EXACT.EXPLODE("Community Care")

SYSTEMATIC REVIEW – ASSIA

Population Terms (Mental Illness):

SU.EXACT.EXPLODE("Psychiatric Disorders")
SU.EXACT.EXPLODE("Mental Health")

Population Terms (Prisoners):

SU.EXACT.EXPLODE("Prisons")
SU.EXACT.EXPLODE("Prisoners")
SU.EXACT.EXPLODE("Violent Mentally Ill People")

Population Terms (Released):

SU.EXACT.EXPLODE("Release")
SU.EXACT.EXPLODE("Parole")

Design Terms:

SU.EXACT.EXPLODE("Randomized Controlled Trials ")

Intervention Terms:

SU.EXACT.EXPLODE("Community Psychiatric Nursing")
SU.EXACT.EXPLODE("Community Health Services")
SU.EXACT.EXPLODE("Community Care")

SYSTEMATIC REVIEW – Criminal Justice

Population Terms (Mental Illness):

SU.EXACT.EXPLODE("Mental Disorders")
SU.EXACT.EXPLODE("Mental Health")

Population Terms (Prisoners):

SU.EXACT.EXPLODE("Prisons")
SU.EXACT.EXPLODE("Prisoners")

Population Terms (Released):

SU.EXACT.EXPLODE("Rehabilitation of Criminals")
SU.EXACT.EXPLODE("Parole & Probation")

Design Terms:

SU.EXACT.EXPLODE("Clinical Trials ")

Intervention Terms:

SU.EXACT.EXPLODE("Psychiatric – Mental Health Nursing")
SU.EXACT.EXPLODE("Community Health Care")
SU.EXACT.EXPLODE("Correctional Treatment Programs")

LIMIT - Title and Abstract

COCHRANE SEARCHES

SYSTEMATIC REVIEW – CENTRAL

Population Terms (Mental Illness):

[Mental Disorders] explode all trees
[Mentally Ill Persons] explode all trees

Population Terms (Prisoners):

[Prisons] explode all trees
[Prisoners] explode all trees

Population Terms (Released):

NO APPROPRIATE

Design Terms:

[Clinical Trial] explode all trees

Intervention Terms:

[Mental Health Services] explode all trees

LIMIT - In Trials

3) SEARCH STRATEGY FOR GREY LITERATURE DATABASES

BASE Search

(mental OR severe mental illness OR SMI OR severe persistent mental illness OR serious mental illness OR schzio* OR depressi* OR bipolar* OR psychiat* OR psychos* OR psychot* OR patient* OR service user* OR client* OR diagnos*) AND (prison* OR offend* OR remand* OR sentence* OR detain* OR criminal* OR convict* OR felon* OR jail* OR gaol* OR detention* OR correction* OR forensic*) AND (reentry OR re-entry OR release* OR reintegrat* OR re-integrat* OR transition OR supervis* OR discharg* OR bail* OR probation* OR parole* OR resettle) AND (program* OR treat* OR therap* OR intervention*)*

LIMIT – Reports, Papers, Lectures

NOTE = Too common terms removed. Design terms removed due to character limits in search database. Limited to formats that wouldn't be retrieved in other databases (i.e. journal articles)

*Removed terms: (*pre- OR pre OR under- OR under) trial; "(case OR care) management"; "(case OR care) AND (coordination OR co-ordination)"; "psychosocial OR psycho-social";
"discharge plan*"; "care plan*"; "(pre OR pre-) discharge"; "(post OR post-) discharge"; "community"

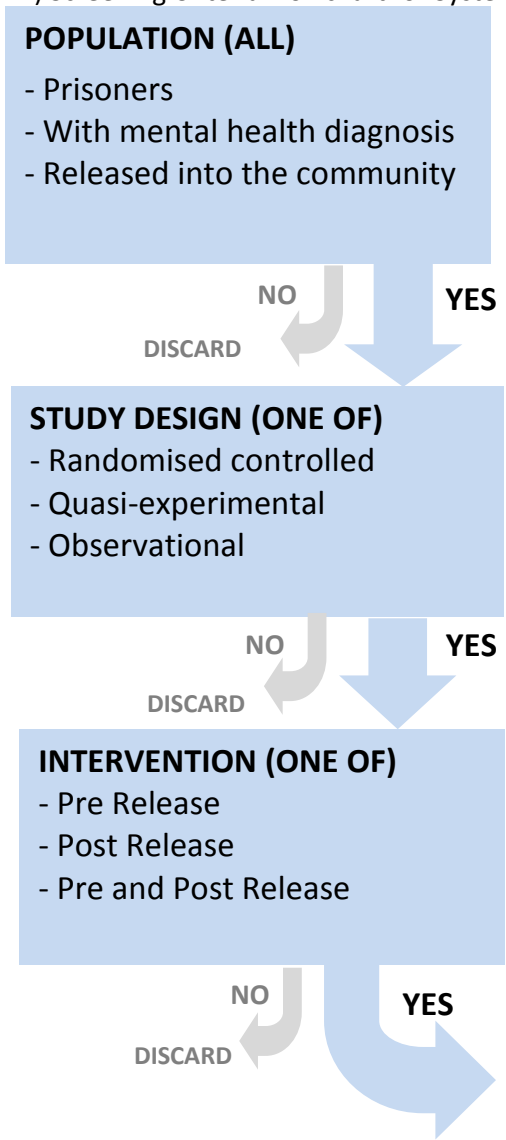
OpenGrey

(mental OR severe mental illness OR SMI OR severe persistent mental illness OR serious mental illness OR schzio* OR depressi* OR bipolar* OR psychiat* OR psychos* OR psychot* OR patient* OR service user* OR client* OR diagnos*) AND (prison* OR offend* OR remand* OR sentence* OR detain* OR criminal* OR convict* OR felon* OR jail* OR gaol* OR detention* OR correction* OR forensic*) AND (reentry OR re-entry OR release* OR reintegrat* OR re-integrat* OR transition OR supervis* OR discharg* OR bail* OR probation* OR parole* OR resettle) AND* (randomi?ed controlled trial OR randomi?ed control trial OR randomi?ed clinical trial OR random* OR control* OR RCT OR pragmatic trial OR controlled trial OR control trial OR proof of concept trial OR proof of principle trial OR control group OR quasi* OR cohort study OR case control OR case-control OR case series OR case-series OR pilot OR prospective OR longitudinal) AND *(program* OR treat* OR therap* OR intervention*)*

Removed terms: "(case OR care) management"; "(case OR care) AND (coordination OR co-ordination)"; "psychosocial OR psycho-social"; "discharge plan*"; "care plan*"; "(pre OR pre-) discharge"; "(post OR post-) discharge"; "community"

NOTE = Terms removed due to allowed length of search

4) Screening Criteria Flowchart for Systematic Review



Setting and Population of Interest

1) Have been detained in any prison facility. Terminology for this may differ across countries (i.e. US distinction between prison and jail)

2) Diagnosed with a mental health condition. No restrictions will be placed on the type of mental health condition.

3) Have been released into the community. No restrictions are placed on time in prison or type of detention (e.g. remand). Those returned to prison or hospitalised after a time in the community will be included.

Type of Study Design

1) Due to the limited number of studies expected, study design will not be restricted to randomised or controlled trials. The quality of study designs will be discussed but including a range of trials will maximise interventions that can be assessed.

2) The following types of design will be included:
   a. Randomised controlled trials
   b. Quasi-experimental studies (i.e. non randomised controlled)
   c. Observational studies (i.e. cohort study, case series)

Type of Intervention

1) The defining feature of an intervention must be that they are targeted at the release period and implemented in the period immediately prior to release, after release, or before and after release (i.e. a study examining the effect of mental health treatment in prison would be excluded unless they specifically described efforts made in the lead up to release).

2) Interventions may be based on any treatment model (i.e. case management, referral, psychosocial support). In addition to medical interventions, other services will be included (i.e. housing support, social work)

+ **DATA-BASED STUDY REPORTED IN ANY FORM** **=** **GET FULL TEXT**

Appendix II

1) Participant Information Sheet for Quantitative Study
2) Participant Consent Form for Quantitative Study
3) Adapted Client Services Receipt Inventory (Beecham & Knapp, 2001)
4) Summary of The Operational Criteria Checklist for Psychotic and Affective Illness (Rucker et al., 2011)
5) Summary of Structured Clinical Interview for DSM-IV Personality Disorders (Spitzer, Williams, Gibbon, & First, 1990)
6) Michigan Alcohol Screening Test (Selzer, 1971)
7) Drug Abuse Screening Test (Skinner, 1982)
8) Follow Up Proforma for Six Weeks and Six and 12 Months

The University of Manchester

The University of Manchester

Improving Services for Prisoners with Mental Illness who are Due to be Released (CrISP)

PARTICIPANT INFORMATION SHEET
Service User

Introduction

My name is Gareth, I'm a researcher working at Kings College London, Health Service and Population Research Department. At the moment we are working on a project to examine whether a specific way of working with prisoners during release from prison, Critical Time Intervention (CTI), is helpful in improving a person's contact with health and social care services following release from prison. We also want to see if Critical Time Intervention (CTI) can reduce the need for mental health in-patient treatment and reduce re-offending.

What is the purpose of this study?

There are more people in prison with mental health problems than in the community and achieving stable care upon release is problematic. Previous research has shown that very few people actually attend follow-up appointments in the community when released from prison. If people stayed in contact with services they may be more likely to stay well, sustain good family relationships and may also be less likely to commit further crimes.

The aim of this project is to test a model called Critical Time Intervention (CTI). In a very small study we found that if Critical Time Intervention (CTI) was used before and after release from prison, people were much more likely to stay in contact with services.

Why have I been invited?

You have been invited to take part in this study because you are currently in one of the three English prisons where this study is being conducted; you are in contact with the prison mental health in-reach team and are within six months of release.

Do I have to take part?

No, taking part is voluntary. If you would prefer not to take part you do not have to give a reason and no pressure will be put on you to try and change your mind. You can change your mind about taking part at any time. If you decide not to take part or withdraw at any stage, your legal and parole rights and your access to medical care will not be affected.

What will I happen to me if I take part?
If you agree to take part you will be put in either the Critical Time Intervention (CTI) group or the Treatment As Usual group at random.

Treatment as Usual
If you are in the Treatment As Usual group you will be involved in the standard discharge planning process within the prison, nothing different will happen. If you agree to take part then I will arrange a time to come and see you to ask you a series of questions, this should take about two hours (you can have as many breaks as you need). The questions will be about things like your health needs, use of services and how you've been feeling. At six weeks after release from prison we would like to contact your community mental health team, and we may also like to speak to you to see how well you have been getting on. If we would like to interview you six weeks after release, we will speak to you about this nearer the time. Also, we would like to obtain information at six months and 12 months after release. This information is held on national databases and tells us things like the number of times you were seen by the health service or if you have had contact with the Criminal Justice System. We will not need to contact you directly at six or 12 months following release.

Critical Time Intervention
If you are in the Critical Time Intervention group you will work with a Critical Time Intervention manager (CTI manager for short). While in the prison the CTI manager will work with you to look at what your needs might be on release and develop a tailor-made discharge package for you. They will also contact the community services you might need to see when you get out. Once you have left prison the CTI manager will help you with things like, coming with you to appointments. The number of times you will see the CTI manager will depend on how many you feel you might need e.g. one to five meetings per week for the first two weeks following release. Over time your contact with the CTI manager will reduce but they will remain in regular contact and help you if there are any problems. Once you are settled back into the community the CTI manager will no longer contact you. This will generally happen between three and six weeks after your release.

If you agree to take part then I will arrange a time to come and see you to ask you a series of questions, this should take about two hours (you can have as many breaks as you like). The questions will be about things like your health needs, use of services and how you've been feeling. At six weeks after release from prison we would like to contact your community mental health team, and we may also like to speak to you to see how well you have been getting on. If we would like to interview you six weeks after release, we will speak to you about this nearer the time. Also we would like to obtain information at six months and twelve months after release. This information is held on national databases and tells us things like the number of times you were seen by the health service or if you have had contact with the Criminal Justice System. We will not need to contact you directly at six or 12 months following release.

What are the possible disadvantages and risks of taking part?

For all participants there is the risk that you may become distressed during the interview as we will talk about your mental illness. There are set procedures for me to follow if this were to happen. For the Critical Time Intervention participants you will be involved in an intensive process with the CTI manager.

What are the possible benefits of taking part?
Taking part may help to improve your contact with community services after release from prison. Findings from the research may help improve services for future prisoners with mental illness who are released from prison.

What happens when the research study stops?
All participants in the Critical Time Intervention group will continue to the end of the intervention process and then standard services will resume.

If I agree to take part what happens to the information?
The information you give us will be kept confidential and will be used in a way that will not allow you to be identified individually. However, data collected during the study may be looked at by individuals from the University of Manchester, from regulatory authorities or from the NHS Trust, e.g. to check that the proper consenting processes have been carried out. The information will be kept in a locked filing cabinet for no longer than five years and will be used for this study only. If during the course of the study, for whatever reason, you lose the ability to make your own decisions your data will be withdrawn from the study.

Please also be aware that the researcher has a duty to inform prison staff of the following:

a. Behaviour that is against prison rules and can be adjudicated against;
b. Information that either indicates a risk of harm to yourself or others or refers to a new crime committed or plan to commit;
c. Undisclosed illegal acts;
d. Behaviour that is harmful to you (e.g. intention to self-harm or commit suicide) and;
e. Information that raises concerns about terrorist, radicalisation or security issues**.**

What will happen to the results of the research study?

It is hoped that the results of the study will be used to improve services for people with mental illness who are released from prison.

What if there is a problem?

Complaints

If you have a concern about any aspect of this study, you should speak to a member of prison staff, who will then contact the research team for you.

Harm

In the event that something does go wrong and you are harmed during the research you may have grounds for a legal action for compensation against The University of Manchester but you may have to pay your legal costs. The normal National Health Service complaints mechanisms will still be available to you.

Who is organising and funding the research?

This study is funded by The National Institute for Health Research and is being carried out by the University of Manchester.

Who has reviewed the study?

This study has undergone an independent external review by The National Institute for Health Research who are the funders. An NHS Ethics Committee, the NHS National Information Governance Board and local Trust Research Governance groups have also reviewed the study.

What do I do now?

Think about the information on this sheet and ask me about anything that you are not sure about. If you agree to take part, we will go ahead.

THANK YOU FOR READING THIS

The University of Manchester

The University of Manchester

Critical time intervention for severely mentally ill released prisoners: A randomised control trial (CrISP)

Participant CONSENT FORM

Name _____

Please initial in each box

1. I confirm that I have read and understood the attached information sheet (Version 3 – 08/03/2012) and have had the opportunity to ask questions. ☐

2. I understand that my participation is voluntary and that I am free to withdraw from the study at any time without my medical care or legal rights being affected. ☐

3. I give permission for the research team to access all my case notes and medical records. ☐

4. I give permission for the research team to contact my community mental health team at six weeks after my release from prison to take part in a follow-up. ☐

5. I give permission for the research team to contact me at six weeks after my release from prison to take part in a follow-up. ☐

6. I understand that information held and maintained by The Health & Social Care Information Centre may be used to help contact me or provide information about my health status. I understand that some of this data will be sensitive e.g. any detention under the Mental Health Act ☐

7. I give permission for the research team to access any of my records held on the Police National Computer. ☐

8. I understand that relevant sections of my medical notes and data collected during the study may be looked at by individuals from the University of Manchester, from regulatory authorities or from the NHS Trust, where it is relevant to my taking part in this research. I give permission for these individuals to have access to my records. ☐

9. I hereby give consent to be involved in this research project. ☐

Name of Participant Signature of Participant Date

Name of Researcher Signature of Researcher Date

3) Adapted Client Services Receipt Inventory (Beecham & Knapp, 2001)

Participant ID: Researcher initial:
Date: Establishment:

CTI: Demographics and Service Contact Proforma

Demographics

1. Age: _____

2. Ethnicity:

☐ White – British ☐ White – Irish ☐ Other White
☐ White & Black Caribbean ☐ White & Black African ☐ White and Asian
☐ Other Mixed ☐ Black Caribbean ☐ Black African
☐ Other Black
☐ Indian ☐ Pakistani ☐ Bangladeshi
☐ Other Asian
☐ Chinese ☐ Other ☐ Unknown ☐ Prefer not to answer

3. Marital Status:

☐ Single
☐ Married (Partner)
☐ Divorced
☐ Separated
☐ Widowed

4. Employment Status:

☐ Employed full time

☐ Employed part time

☐ Unemployed (but cash in hand work)

☐ Unemployed

☐ Retired

☐ Long-term sick (on benefits)

☐ Long-term sick (employed)

☐ House husband (not seeking work and no benefits)

☐ Other (please specify _____)

5. Living Circumstances:

☐ Alone

☐ With spouse/partner (with children)

☐ With spouse/partner (without children)

☐ With children only

☐ With parents

☐ Other (please specify _____)

6. Accommodation type:

☐ Homeless/no fixed abode

☐ Temporary accommodation

☐ Supervised hostel

☐ Unsupervised hostel

☐ House or flat

☐ Other (please specify _____)

7. What is the main offence you are charged with/convicted of?

☐ Violence against the person
☐ Sexual offence
☐ Robbery
☐ Burglary
☐ Theft and handling
☐ Fraud and forgery
☐ Drug offence
☐ Motoring offence
☐ Criminal Damage
☐ Other offence (please specify_____)

8. Prisoner status:

☐ Remand

☐ Convicted - unsentenced
☐ Convicted – sentenced, if so please specify sentence length: _____

9. How long have you been in prison on this sentence/charge? (in months)

_____

10. Have you been in prison before? If so, how many times (not including this occasion but including remands)?

    _____

11. What type of wing are you currently located on?

    ☐ Remand/induction

    ☐ Convicted

    ☐ Vulnerable Prisoner Unit

    ☐ Healthcare

    ☐ Cat A/Closed Secure Unit

    ☐ Segregation

    ☐ Detox

    ☐ Drug free
    ☐ Older person
    ☐ Other (please specify _____)

12. What regime are you currently on?

    ☐ Basic

    ☐ Standard

    ☐ Enhanced

    ☐ Other (please specify _____)

Service Contact

13. Have you ever received any intervention for mental health problems?

    ☐ Yes ☐ No

14. Have you ever received any intervention from Community Mental Health Services?

    ☐ Yes ☐ No

    If yes, how long ago? _____
    If yes, what type of intervention (tick all that apply)?
    ☐ CMHT

☐ Inpatient
☐ ACT/EIS
☐ Crisis Team
☐ Home treatment
☐ Other (please specify _____)

15. Have you ever attended your GP with a mental health problem?

☐ Yes ☐ No

16. Have you ever received mental health services in prison before?

☐ Yes ☐ No

If yes, how long ago? _____

If yes, what type of intervention (tick all that apply)?
☐ In-reach services
☐ Primary care mental health services
☐ Psychiatrist
☐ Other (please specify _____)

17. Have you ever received inpatient drug detox services?

☐ Yes ☐ No

18. Have you ever had inpatient drug rehabilitation?

☐ Yes ☐ No

19. Have you ever received inpatient alcohol detox services?

☐ Yes ☐ No

20. Have you ever had inpatient alcohol rehabilitation?

☐ Yes ☐ No

21. How long ago was your first contact with mental health services?

☐ Less than 1 month ago

☐ 1-5 months ago

☐ 6-12 months ago

☐ 13-60 months ago

☐ Over 60 months ago

22. When was your most recent contact with mental health services

☐ Less than 1 month ago

☐ 1-5 months ago

☐ 6-12 months ago

☐ 13-60 months ago

☐ Over 60 months ago

23. On your most recent contact, who were you seen by (tick all that apply)?

☐ CMHT
☐ Inpatient
☐ ACT/EIS
☐ Crisis Team
☐ Home treatment
☐ Other (please specify _____)

24. Were you in contact with mental health services when you were received into custody on this occasion?

☐ Yes ☐ No

If yes, what type of services (tick all that apply)?

☐ CMHT
☐ Inpatient
☐ ACT/EIS
☐ Crisis Team
☐ Home treatment
☐ Other (please specify _____)

25. Were you receiving mental health care from your GP when you came into prison?

☐ Yes ☐ No

26. When you were received into custody were you undergoing any interventions from drug treatment services?

☐ Yes ☐ No

If yes, what type of services were you receiving?

☐ Community Drug Team
☐ Narcotics Anonymous
☐ Other (please specify_____)

27. When you were received into custody were you undergoing any interventions from alcohol treatment services?

☐ Yes ☐ No

If yes, what type of services were you receiving?

☐ Community Alcohol Team
☐ Alcoholics Anonymous
☐ Other (please specify_____)

28. Do you have a clinical diagnosis?

☐ Yes ☐ No

If yes, please specify _____

29. Are you currently receiving any psychological interventions?

☐ Individual

☐ Group

☐ Family

☐ Other (please specify_____)

30. Do you think you currently require help for an alcohol problem?

☐ Yes ☐ No

31. Do you think you currently require help for a drug problem?

☐ Yes ☐ No

32. Do you think you currently require help with a mental health problem?

☐ Yes ☐ No

4) Summary of The Operational Criteria Checklist for Psychotic and Affective Illness (Rucker et al., 2011)

Opcrit for Windows (v4), Item Guidelines & Ratings.

Details & History

1. Source of Rating
2. Time Frame
3. Gender
4. Age of onset
5. Mode of onset
6. Single (subject never married / lived as married)
7. Unemployed at onset
8. Duration of illness in weeks (max=99)
9. Poor work adjustment
10. Poor premorbid social adjustment
11. Premorbid personality disorder
12. Alcohol/drug abuse within one year of onset of psychotic symptoms
13. Family history of schizophrenia
14. Family history of other psychiatric disorder
15. Coarse brain disease prior to onset
16. Definite psychosocial stressor prior to onset

Appearance & Behaviour

17. Bizarre behaviour
18. Catatonia
19. Excessive activity
20. Reckless activity
21. Distractibility
22. Reduced need for sleep
23. Agitated activity
24. Slowed activity
25. Loss of energy/tiredness

Speech & Form of Thought

26. Speech difficult to understand
27. Incoherent
28. Positive formal thought disorder
29. Negative formal thought disorder
30. Pressured speech
31. Thoughts racing

Affect and Associated Features

32. Restricted affect
33. Blunted affect
34. Inappropriate affect
35. Elevated mood
36. Irritable mood
37. Dysphoria
38. Diurnal variation (mood worse mornings)
39. Loss of pleasure
40. Altered libido
41. Poor concentration
42. Excessive self reproach
43. Suicidal ideation
44. Initial insomnia
45. Middle insomnia (broken sleep)
46. Early morning waking
47. Excessive sleep
48. Poor appetite
49. Weight loss
50. Increased appetite
51. Weight gain
52. Relationship between psychotic and affective symptoms
53. Increased sociability

Abnormal Beliefs and Ideas

54. Persecutory delusions
55. Well organised delusions
56. Increased self esteem
57. Grandiose delusions
58. Delusions of influence
59. Bizarre delusions
60. Widespread delusions
61. Delusions of passivity
62. Primary delusional perception
63. Other primary delusions
64. Delusions & hallucinations last for one week
65. Persecutory/jealous delusions & hallucinations
66. Thought insertion
67. Thought withdrawal
68. Thought broadcast
69. Delusions of guilt
70. Delusions of poverty
71. Nihilistic delusions

Abnormal Perceptions

72. Thought echo
73. Third person auditory hallucinations
74. Running commentary voices
75. Abusive/accusatory/persecutory voices

76. Other (non affective) auditory hallucinations
77. Non-affective hallucination in any modality

Substance Abuse or Dependence

78. Life time diagnosis of alcohol abuse/dependence
79. Life time diagnosis of cannabis abuse/dependence
80. Life time diagnosis of other abuse/dependence
81. Alcohol abuse/dependence with psychopathology
82. Cannabis abuse/dependence with psychopathology
83. Other abuse/dependence with psychopathology

General Appraisal

84. Information not credible
85. Lack of insight
86. Rapport difficult
87. Impairment/incapacity during disorder
88. Deterioration from premorbid level of functioning
89. Psychotic symptoms respond to neuroleptics
90. Course of disorder

Full details of the OPCRIT scale and item guidelines can be found at:

http://sgdp.iop.kcl.ac.uk/opcrit/ItemGuidelines.pdf

5) Summary of Structured Clinical Interview for DSM-IV Personality Disorders (Spitzer, Williams, Gibbon, & First, 1990)

SCID-II **SUMMARY SCORESHEET**

SCID-II SUMMARY SCORESHEET

Overall quality and completeness of information:

1 = poor, 2 = fair 3 : good, 4 = excellent 9

Duration of interview (minutes) ___ ___ ___ 10

Personality Disorder	Number of Items Coded "3" (*Boxed numbers indicate threshold required for a diagnosis.*)									
01 Avoidant 1-7	1	2	3	[4]	5	6	7			11
02 Dependent 8-15	1	2	3	4	[5]	6	7	8		12
03 Obsessive-Compulsive 16-24	1	2	3	[4]	5	6	7	8		13
04 Passive-Aggressive 25-32	1	2	3	[4]	5	6	7			14
05 Depressive 33-40	1	2	3	4	[5]	6	7			15
06 Paranoid 41-48	1	2	3	[4]	5	6	7			16
07 Schizotypal 49-59	1	2	3	4	[5]	6	7	8	9	17
08 Schizoid 60-65	1	2	3	[4]	5	6	7			18
09 Histrionic 66-72	1	2	3	4	[5]	6	7	8		19
10 Narcissistic 73-89	1	2	3	4	[5]	6	7	8	9	20
11 Borderline 90-104	1	2	3	4	[5]	6	7	8	9	21
12 Antisocial 105-119	1	2	[3]	4	5	6	7			22
13 Not Otherwise Specified (NOS)	[1]									23

PRINCIPAL AXIS II DIAGNOSIS (i.e., the Personality Disorder that is—or should be—the main focus of clinical attention).

Enter code number from left of diagnosis above: ___ ___ 24

Note: Enter 99 if no Axis II disorder.

6) Michigan Alcohol Screening Test (Selzer, 1971)

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OF THE SAN FERNANDO VALLEY, INC.

14557 FRIAR STREET, SUITE 107
VAN NUYS, CA 91411
818/997-0414
FAX 818/997-0851
NCADD-SFV@att.net
www.ncadd-sfv.org

Michigan Alcohol Screening Test

The MAST Test is a simple, self scoring test that helps assess if you have a drinking problem. Please circle the answers to the following YES or NO questions:

1. Do you feel you are a normal drinker? ("normal" - drink as much or less than most other people)
Circle Answer: YES NO

2. Have you ever awakened the morning after some drinking the night before and found that you could not remember a part of the evening?
Circle Answer: YES NO

3. Does any near relative or close friend ever worry or complain about your drinking?
Circle Answer: YES NO

4. Can you stop drinking without difficulty after one or two drinks?
Circle Answer: YES NO

5. Do you ever feel guilty about your drinking?
Circle Answer: YES NO

6. Have you ever attended a meeting of Alcoholics Anonymous (AA)?
Circle Answer: YES NO

7. Have you ever gotten into physical fights when drinking?
Circle Answer: YES NO

8. Has drinking ever created problems between you and a near relative or close friend?
Circle Answer: YES NO

9. Has any family member or close friend gone to anyone for help about your drinking?
Circle Answer: YES NO

10. Have you ever lost friends because of your drinking?
Circle Answer: YES NO

11. Have you ever gotten into trouble at work because of drinking?
Circle Answer: YES NO

12. Have you ever lost a job because of drinking?
Circle Answer: YES NO

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14557 FRIAR STREET, SUITE 107
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818/997-0414
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13. Have you ever neglected your obligations, your family, or your work for two or more days in a row because you were drinking?
Circle Answer: YES NO

14. Do you drink before noon fairly often?
Circle Answer: YES NO

15. Have you ever been told you have liver trouble such as cirrhosis?
Circle Answer: YES NO

16. After heavy drinking have you ever had delirium tremens (D.T.'s), severe shaking, visual or auditory (hearing) hallucinations?
Circle Answer: YES NO

17. Have you ever gone to anyone for help about your drinking?
Circle Answer: YES NO

18. Have you ever been hospitalized because of drinking?
Circle Answer: YES NO

19. Has your drinking ever resulted in your being hospitalized in a psychiatric ward?
Circle Answer: YES NO

20. Have you ever gone to any doctor, social worker, clergyman or mental health clinic for help with any emotional problem in which drinking was part of the problem?
Circle Answer: YES NO

21. Have you been arrested more than once for driving under the influence of alcohol?
Circle Answer: YES NO

22. Have you ever been arrested, even for a few hours because of other behavior while drinking?
(If Yes, how many times _____)
Circle Answer: YES NO

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14557 FRIAR STREET, SUITE 107
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818/997-0414
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Scoring for the MAST Test

Please score one point if you answered the following:

1. No

2. Yes

3. Yes

4. No

5. Yes

6. Yes

7 through 22: Yes

DAST (Drug Abuse Screening Test)

Instructions: Circle either yes or no to the right of the question to indicate your answer.

1. Have you used drugs other than those required for medical reasons?	Yes	No
2. Have you abused prescription drugs?	Yes	No
3. Do you abuse more than one drug at a time?	Yes	No
4. Can you get through the week without using drugs (other than those required for medical reasons)?	Yes	No
5. Are you always able to stop using drugs when you want to?	Yes	No
6. Do you abuse drugs on a continuous basis?	Yes	No
7. Do you try to limit your drug use to certain situations?	Yes	No
8. Have you had "blackouts" or "flashbacks" as a result of drug use?	Yes	No
9. Do you ever feel bad about your drug abuse?	Yes	No
10. Does your spouse (or parents) ever complain about your involvement with drugs?	Yes	No
11. Do your friends or relatives know or suspect you abuse drugs?	Yes	No
12. Has drug abuse ever created problems between you and your spouse?	Yes	No
13. Has any family member ever sought help for problems related to your drug use?	Yes	No
14. Have you ever lost friends because of your use of drugs?	Yes	No
15. Have you ever neglected your family or missed work because of your use of drugs?	Yes	No
16. Have you ever been in trouble at work because of drug abuse?	Yes	No
17. Have you ever lost a job because of drug abuse?	Yes	No
18. Have you gotten into fights when under the influence of drugs?	Yes	No
19. Have you ever been arrested because of unusual behavior while under the influence of drugs?	Yes	No
20. Have you ever been arrested for driving while under the influence of drugs?	Yes	No
21. Have you engaged in illegal activities to obtain drugs?	Yes	No
22. Have you ever been arrested for possession of illegal drugs?	Yes	No
23. Have you ever experienced withdrawal symptoms as a result of heavy drug intake?	Yes	No
24. Have you had medical problems as a result of your drug use (e.g., memory loss, hepatitis, convulsions, or bleeding)?	Yes	No
25. Have you ever gone to anyone for help for a drug problem?	Yes	No
26. Have you ever been in hospital for medical problems related to your drug use?	Yes	No
27. Have you ever been involved in a treatment program specifically related to drug use?	Yes	No
28. Have you been treated as an outpatient for problems related to drug abuse?	Yes	No

8) Follow Up Proforma for Six Weeks and Six and 12 Months

CrISP FOLLOW-UP PROFORMA

1. Hospitalisation

1a.	**Has participant been admitted to hospital ?**	**1**	**Yes**	☐
		0	**No**	☐
		777	*Not available or not applicable*	☐
		888	*Not done*	☐
		999	*Unknown*	☐

1b.	**If 'yes' for the above question, what type of unit?**	**1**	**Psychiatric unit**	☐
		2	**Medical/surgical unit**	☐
		777	*Not available or not applicable*	☐
		888	*Not done*	☐
		999	*Unknown*	☐

1c.	**If 'Psychiatric unit' for the above question, what type of psychiatric unit?**	**1**	**Acute psychiatric**	☐
		2	**Secure unit**	☐
		777	*Not available or not applicable*	☐
		888	*Not done*	☐
		999	*Unknown*	☐

2. Admissions and ward type

Ward type: -		Admission date	Discharge date
01 02 03	Acute psychiatric Secure psychiatric Medical		

3. Contacts

What type of contact has the participant had: –		How many contacts?
01 02 03 04 05 06	Psychiatrist Psychologist Occupational therapist Community mental health nurse Care-Coordinator Other	

4.	How many appointments have been missed?		
		777	*Not available or not applicable* ☐
		888	*Not done* ☐

		999	*Unknown* ☐

5.	**Does the participant currently have an allocated care co-ordinator?**	**1**	**Yes** ☐
		0	**No** ☐
		777	*Not available or not applicable* ☐
		888	*Not done* ☐
		999	*Unknown* ☐

6.	**If 'yes' to the above question, does the participant have future planned contact with their care co-ordinator?**	**1**	**Yes** ☐
		0	**No** ☐
		777	*Not available or not applicable* ☐
		888	*Not done* ☐
		999	*Unknown* ☐

7.	**Does the participant have a current care plan?**	**1**	**Yes** ☐
		0	**No** ☐
		777	*Not available or not applicable* ☐
		888	*Not done* ☐
		999	*Unknown* ☐

8.	**Has the participant had a CPA?**	**1**	**Yes** ☐
		0	**No** ☐
		777	*Not available or not applicable* ☐
		888	*Not done* ☐
		999	*Unknown* ☐

9.	**Has the participant got a future CPA arranged?**	**1**	**Yes** ☐
		0	**No** ☐
		777	*Not available or not applicable* ☐
		888	*Not done* ☐
		999	*Unknown* ☐

10.	**Is the participant currently receiving medication for mental illness?**	**1**	**Yes** ☐
		0	**No** ☐
		777	*Not available or not applicable* ☐
		888	*Not done* ☐
		999	*Unknown* ☐

11.	**If 'yes' for the above question, is the participant compliant?**	**1**	**Yes** ☐
		2	**No** ☐
		777	*Not available or not applicable* ☐
		888	*Not done* ☐
		999	*Unknown* ☐

12.	**Is the participant registered with a GP?**	**1**	**Yes** ☐
		2	**No** ☐
		777	*Not available or not applicable* ☐
		888	*Not done* ☐
		999	*Unknown* ☐

Accommodation status

13.	**Private home – owner occupied**	☐☐☐ days

		777	*Not available or not applicable* ☐
		888	*Not done* ☐
		999	*Unknown* ☐

14.	**Private home – rented**	☐☐☐ days	
		777	*Not available or not applicable* ☐
		888	*Not done* ☐
		999	*Unknown* ☐

15.	**Local authority - rented**	☐☐☐ days	
		777	*Not available or not applicable* ☐
		888	*Not done* ☐
		999	*Unknown* ☐

16.	**Bedsit**	☐☐☐ days	
		777	*Not available or not applicable* ☐
		888	*Not done* ☐
		999	*Unknown* ☐

17.	**Bed & breakfast, boarding house or hotel**	☐☐☐ days	
		777	*Not available or not applicable* ☐
		888	*Not done* ☐
		999	*Unknown* ☐

18.	**Hostel or shelter**	☐☐☐ days	
		777	*Not available or not applicable* ☐
		888	*Not done* ☐
		999	*Unknown* ☐

19.	**Residential rehabilitation**	☐☐☐ days	
		777	*Not available or not applicable* ☐
		888	*Not done* ☐
		999	*Unknown* ☐

20.	**Residential half-way house**	☐☐☐ days	
		777	*Not available or not applicable* ☐
		888	*Not done* ☐
		999	*Unknown* ☐

21.	**Squat**	☐☐☐ days	
		777	*Not available or not applicable* ☐
		888	*Not done* ☐
		999	*Unknown* ☐

22.	**Living on the street**	☐☐☐ days	
		777	*Not available or not applicable* ☐
		888	*Not done* ☐
		999	*Unknown* ☐

23.	**Prison or Police cells**	☐☐☐ days	
		777	*Not available or not applicable* ☐
		888	*Not done* ☐
		999	*Unknown* ☐

24.	**Other – please specify below**	☐☐☐ days	
		777	*Not available or not applicable* ☐
		888	*Not done* ☐
		999	*Unknown* ☐

25.	**If 'other' for the above question, please specify**		
		777	*Not available or not applicable* ☐
		888	*Not done* ☐
		999	*Unknown* ☐

Drug and Alcohol Contact

26.	**Has the participant been referred to drug and alcohol services?**	**1**	**Yes** ☐
		0	**No** ☐
		777	*Not available or not applicable* ☐
		888	*Not done* ☐
		999	*Unknown* ☐

27.	**If 'yes' for the above question, how many contacts did they have?**	☐☐☐	
		777	*Not available or not applicable* ☐

		888	*Not done* ☐
		999	*Unknown* ☐

Employment

28.	**Has the participant been in open employment?**	**1**	**Yes** ☐
		0	**No** ☐
		777	*Not available or not applicable* ☐
		888	*Not done* ☐
		999	*Unknown* ☐

29.	**If 'yes' for the above question, was this full-time or part-time?**	**1**	**Full-time** ☐
		2	**Part-time** ☐
		777	*Not available or not applicable* ☐
		888	*Not done* ☐
		999	*Unknown* ☐

Family

28.	**Has the participant been in contact with family?**	**1**	**Yes** ☐
		0	**No** ☐
		777	*Not available or not applicable* ☐
		888	*Not done* ☐
		999	*Unknown* ☐

Appendix III

1) Participant (Staff) Information Sheet for Qualitative Study
2) Participant (Staff) Consent Form for Qualitative Study
3) Topic Guide for Prison Mental Health Staff
4) Topic Guide for Community Mental Health Staff
5) Participant (Prisoner) Information Sheet for Qualitative Study
6) Participant (Prisoner) Consent Form for Qualitative Study
7) Topic Guide for Pre Release CTI Participant
8) Topic Guide for Post Release CTI Participant
9) Topic Guide for Pre Release TAU Participant
10) Topic Guide for Post Release TAU Participant

The University of Manchester

Critical time intervention for severely mentally ill released prisoners: A randomised control trial (CrISP)

Staff

INFORMATION SHEET

Introduction

My name is Caroline Stevenson and I am a researcher working at the University of Manchester, Centre for Mental Health and Risk. At the moment we are working on a project to examine whether a specific model of case management, Critical Time Intervention (CTI), is effective in improving engagement with health and social care services upon discharge from prison; reducing mental health in-patient episodes and reducing re-offending among released adult male prisoners with severe and enduring mental illness.

What is the purpose of the study?

Case management was established as a way to co-ordinate and integrate mental health and social care within limited resources, becoming a cornerstone of UK community mental healthcare. However, evidence of the effectiveness of case management is mixed. Assertive Community Treatment (ACT), a type of case management, has been shown to be effective in keeping people with mental illness in contact with services. Assertive Community Treatment has been widely researched and there is reliable evidence for its effectiveness.

Critical Time Intervention (CTI) is an adaptation of ACT with a focus on time-limited, intensive case management when people's circumstances change. The purpose of CTI is to establish a stable support network in the community for vulnerable people who lack established community ties, e.g. those who are homeless or with limited/no close family support. CTI was initially shown to be effective in homeless people with mental illness released from hospital in contact with community services.

Prisoners with mental illness have features in common with homeless people who have mental illness in terms of the problems their chaotic lifestyles present when trying to resettle back into the community upon release from prison. These similarities inspired the research team to adapt CTI for prisoners with mental illness.

We have previously carried out a small proof-of-concept trial of CTI. We found CTI to be practically feasible, and acceptable to prisoners, in terms of their satisfaction with increased levels of support. The trial showed that those who received CTI were more likely to engage with mental health

services upon discharge from prison (61% engaged) in comparison to those receiving treatment as usual (10% engaged).

The risk of suicide and relapse increases substantially when people with mental illness move from institutions into the community. Currently, prisoners with mental illness receive little preparation for resettlement into the community. It is widely accepted that discharge planning within the prison system is a major weakness, but at present we know little about best service models through which to promote continuity of care for this group. This trial of CTI may provide robust evidence for the NHS to use when considering current provision, reviewing models of service delivery, fostering inter-agency communication and introducing improved working practices. This trial aims to firmly establish an effective way to reduce the chances of individuals "falling through the gap" between custodial and health agencies.

Why have I been invited?

You have been invited to take part in this study because as a member of the prison mental health in-reach team or community mental health team you have been responsible for the care of the participant prior to, or post release from prison.

Do I have to take part?

No, taking part is voluntary. If you would prefer not to take part you do not have to give a reason and no pressure will be put on you to try and change your mind. You can change your mind about taking part at any time. If you decide not to take part, or withdraw at any stage, your professional role or prospects within this role will not be affected.

What will I have to do if I take part?

If you agree to take part in the study, I will interview you about the participant for whom you have been responsibility for. The interview will be semi-structured. I will ask about the needs of the discharged prisoner; personal, professional, structural and organisational barriers and facilitators to continuity of care; specific elements of CTI which were judged most valuable by staff and clients; and lessons learned which would valuably inform the generalisability and roll-out of the care model.

Will my taking part in the study be kept confidential?

All the information you give us will be confidential and used for the purposes of this study only. The information will be used in a way that will not allow you to be identified individually. However, data collected during the study may be looked at by individuals from the University of Manchester, from regulatory authorities or from the NHS Trust, where it is relevant to my taking part in this research.

What will happen to the results of the research study?

It is hoped that the results of the study will provide robust evidence for the NHS to use when considering current provision, reviewing models of service

delivery, fostering inter-agency communication and introducing improved working practices. This trial aims to firmly establish an effective way to reduce the chances of individuals "falling through the gap" between custodial and health agencies. All participants will be provided with a summary of the final report.

What if there is a problem?

Complaints

If you have a concern about any aspect of this study, you should ask to speak to the researchers who will do their best to answer your questions. If they are unable to resolve your concern or you wish to make a complaint regarding the study, please contact a University Research Practice and Governance Coordinator on 0161 2757583 or 0161 2758093 or by email to research-governance@manchester.ac.uk.

Harm

In the event that something does go wrong and you are harmed during the research you may have grounds for a legal action for compensation against The University of Manchester but you may have to pay your legal costs. The normal National Health Service complaints mechanisms will still be available to you.

The University of Manchester has cover for no fault compensation for bodily injury, mental injury or death where the injury resulted from a trial or procedure you received as part of the trial. This would be subject to policy terms and conditions. Any payment would be without legal commitment. (Please ask if you wish more information on this). The University would not be bound to pay this compensation where the injury resulted from a drug or procedure outside the trial protocol or the protocol was not followed.

Who is organising and funding the research?

This study is funded by The National Institute for Health Research and is being carried out by the University of Manchester.

Who has reviewed the study?

This study has undergone an independent external review by The National Institute for Health Research who are the funders. The study has also been reviewed by an NHS Ethics Committee, the NHS National Information Governance Board and local Trust Research Governance groups.

Further information and contact details

If you have any concerns or other questions about this evaluation please contact Caroline Stevenson on 0161 3068014.

What do I do now?

Think about the information on this sheet and ask me about anything that you are not sure about. If you agree to take part, we will go ahead.

THANK YOU FOR READING THIS

The University of Manchester

Critical time intervention for severely mentally ill released prisoners: A randomised control trial (CrISP)

Staff
CONSENT FORM

Name _____

Please initial in each box

1. I confirm that I have read and understood the attached information sheet (Version 1 12/09/2011) and have had the opportunity to ask questions. ☐

2. I understand that I can withdraw from the study at any time without having to give any reasons and that my professional role or prospects within this role will not be affected. ☐

3. I understand that relevant sections of my data collected during the study may be looked at by individuals from the University of Manchester, from regulatory authorities or from the NHS Trust, where it is relevant to my taking part in this research. ☐

4. I give permission for these individuals to have access to this data. ☐

5. I hereby give consent to be involved in this research project. ☐

_____	_____	_____
Name of Participant	Signature of Participant	Date
_____	_____	_____
Name of Researcher	Signature of Researcher	Date

Semi-structured Qualitative Interview Schedule: Prison Mental Health Staff

What is your professional role?

Can you talk me through the usual pre-release process for patients being discharged from prison?

How long before discharge does this begin?
How often are they seen?
What are the common needs of prisoners?
What areas do they receive help with and who has responsibility for these? How do you provide help?
After release, who is responsible for their care?
Is the process formally defined/standardised

What organisations, if any, do you liaise with?

Are shared protocols held between all the relevant organisations?
Are roles and responsibilities formally defined?

What is the process for linking prisoners in with these services/organisations they may need contact with?

Is this a formal process or has it developed locally?

Which aspects of the release process work well?

Why?

Which areas of this process could be improved?

How?
Do you feel there are any gaps in the process which allow people to slip through the net?

Overall, how well would you say the pre-release preparation and transition to community processes work?

What do you think of the CTI process?

Positives?

Negatives?

If CTI were to replace TAU do you think this would work?

If yes, why and what would be the benefits?

If no, why not and could changes be made to facilitate implementation?

Semi-structured Qualitative Interview Schedule: Community Mental Health Staff

What is your professional role?

Can you talk me through the usual post-release process for patients coming out of prison?

How long before release do you liaise with prison mental health services?
Is this initiated by staff at the prison?
What are the common needs of patients on release?
What areas do they receive help with and who has responsibility for these? How do you provide help?
Is the process formally defined/standardised

What organisations, if any, do you liaise with?

Are shared protocols held between all the relevant organisations?
Are roles and responsibilities formally defined?

What is the process for linking patients in with these services/organisations they may need contact with?

Is this a formal process or has it developed locally?

Is there a system for checking whether patients attend appointments made for them?

Are there follow-up protocols?
Is there an agreed procedure if patients DNA?

Which aspects of the release process work well?

Why?

Which areas of this process could be improved?

How?
Do you feel there are any gaps in the process which allow people to slip through the net?

Overall, how well would you say the release preparation and transition to community processes work?

What do you think of the CTI process?

Positives?

Negatives?

If CTI were to replace TAU do you think this would work?

If yes, why and what would be the benefits?

If no, why not and could changes be made to facilitate implementation?

The University of Manchester

Improving Services for Prisoners with Mental Illness Who Are Due to be Released (CrISP)

PARTICIPANT INFORMATION SHEET
Service User

Introduction

My name is Caroline, I am a researcher working at the University of Manchester, Centre for Mental Health and Risk. At the moment we are working on a project to examine whether a specific way of working with prisoners during release from prison, Critical Time Intervention (CTI), is helpful in improving a person's contact with health and social care services following release. We also want to see if Critical Time Intervention (CTI) can reduce the need for mental health in-patient treatment and reduce re-offending.

What is the purpose of this study?

There are more people in prison with mental health problems than in the community and achieving stable care upon release is problematic. Previous research has shown that very few people actually attend follow-up appointments in the community when released from prison. If people stayed in contact with services they may be more likely to stay well, sustain good family relationships and may also be less likely to commit further crimes.

The aim of this project is to test a model called Critical Time Intervention (CTI). In a very small study we found that if Critical Time Intervention (CTI) was used before and after release from prison, people were much more likely to stay in contact with services.

Why have I been invited?

You have been invited to take part in a follow-up interview as we have already spoken to you while you were in prison and we would now like to find out how you are getting on.

Do I have to take part?

No, taking part is voluntary. If you would prefer not to take part you do not have to give a reason and no pressure will be put on you to try and change your mind. You can change your mind about taking part at any time. If you decide not to take part, or withdraw at any stage, your legal and parole rights and your access to medical care will not be affected.

What will I have to do if I take part?

If you agree to take part in the follow-up interview, I will come and speak to you again for about an hour. The interview will include some set questions about your needs and how they have been met in prison and in the community. I will ask about how you have found the services you received, about anything you may have found helpful or anything you may feel needs to be improved. As well as the set questions, we can also focus on what you think is important relating to your care before and after release.

Will my taking part in the study be kept confidential?

The information you give us will be kept confidential and will be used in a way that will not allow you to be identified individually. However, data collected during the study may be looked at by individuals from the University of Manchester, from regulatory authorities or from the NHS Trust, e.g. to check that the proper consenting processes have been carried out. The information will be kept in a locked filing cabinet for no longer than five years and will be used for this study only. If during the course of the study, for whatever reason, you lose the ability to make your own decisions your data will be withdrawn from the study.

Please also be aware that the researcher has a duty to inform your care team of the following:

a. Information that either indicates a risk of harm to yourself or others or refers to a new crime committed or plan to commit (if in contact ;
b. Undisclosed illegal acts;
c. Behaviour that is harmful to you (e.g. intention to self-harm or commit suicide) and;
d. Information that raises concerns about terrorist, radicalisation or security issues**.**

What will happen to the results of the research study?

It is hoped that the results of the study will provide evidence for the NHS to use when thinking about the way services fit together and how to improve them. This trial aims to find a way to stop as many people as possible "falling through the gap" between prison and community health services.

What if there is a problem?

Complaints

If you have a concern about any aspect of this study, you should speak to a member of prison staff or your community mental health team, who will then contact the research team for you.

Harm

In the event that something does go wrong and you are harmed during the research you may have grounds for a legal action for compensation against The University of Manchester but you may have to pay your legal costs. The normal National Health Service complaints mechanisms will still be available to you.

Who is organising and funding the research?

This study is funded by The National Institute for Health Research and is being carried out by the University of Manchester.

Who has reviewed the study?

This study has undergone an independent external review by The National Institute for Health Research who is the funders. An NHS Ethics Committee, the NHS National Information Governance Board and local Trust Research Governance groups have also reviewed the study.

What do I do now?

Think about the information on this sheet and ask me about anything that you are not sure about. If you agree to take part, we will go ahead.

THANK YOU FOR READING THIS

The University of Manchester

Critical time intervention for severely mentally ill released prisoners: A randomised control trial (CrISP)

Participant
CONSENT FORM

Name _____

Please initial in each box

1. I confirm that I have read and understood the attached Participant Information Sheet (Qualitative, Version 2-08/03/2012) and have had the opportunity to ask questions. ☐

2. I understand that I can withdraw from the study at any time without having to give any reasons and that my legal rights and my access to medical care will not be affected. ☐

3. I understand that relevant sections of my data collected during the study may be looked at by individuals from the University of Manchester, from regulatory authorities or from the NHS Trust, where it is relevant to my taking part in this research. ☐

4. I give permission for these individuals to have access to this data. ☐

5. I hereby give consent to be involved in this research project. ☐

_____ _____ _____

Name of Participant Signature of Participant Date

_____ _____ _____

Name of Researcher Signature of Researcher Date

Semi-structured Qualitative Interview Schedule: Pre-release CTI Participant

How long to go until you are released?

Do you need help with anything when you are released?

Health
Substance misuse
Housing
Finances
Employment
Family

Are these things you feel you would need help with or are these things your care team have suggested would be helpful?

How often have you been seeing your CTI manager?

What have they been doing to address your problems/needs?

So far, has this been helpful?
What has been good?
What could be improved?

Have you been put in contact with any services yet? If so,

Which ones?
Who organised this?
In what way?
If not, why not? (services poor, hard to organise, not needed)

Are you receiving any treatment at the moment? If so,

What?
Who organised this for you?
If on medication, what kind and will this continue when released? (If so, who will organise this?)
Are you taking the medication? If not, why not?

Have you been in prison before? If so, how have you been finding the release process this time, compared to the previous time/s?

8) Topic Guide for Post Release CTI Participant

Semi-structured Qualitative Interview Schedule: Post Release CTI Participant

How long have you been released from prison?

When you were released did you feel you needed help with anything?

- Health
- Substance misuse
- Housing
- Finances
- Employment
- Family

How have things been going for you since you were released?

- Health
- Substance misuse
- Housing
- Finances
- Employment
- Family

How often did you see your CTI manager before and after release?

What did they do to address your problems/needs?

- Was this helpful?
- What was good?
- What could be improved?

Are you in contact with any services at the moment? If so,

Which ones?
Who organised this?
In what way?
At what time point?
If not, why not? (services poor, too hard to organise, not needed)

Are you receiving any treatment at the moment? If so,

What?
Who organised this for you?
If on medication, what and did this continue from prison? (If so, who organised continuation?)
If not, who made the appointment/started the meds?
Are you taking the medication? If not, why not?

Have you been in prison before? If so, how did you find the release process this time, compared to the previous time/s?

Have you been in contact with the police since release?

If so, for what reason?
How many times?

Have you been in hospital since release?

How did this come about?
How many times?

9) Topic Guide for Pre Release TAU Participant

Semi-structured Qualitative Interview Schedule: Pre-release TAU Participant

How long to go until you are released?

Do you need help with anything when you are released?

Health
Substance misuse
Housing
Finances
Employment
Family

Are these things you feel you would need help with or are these things your care team have suggested would be helpful?

What responses to/support for these needs have you received?

Have you been put in contact with any services yet? If so,

Which ones?
Who organised this?
In what way?
If not, why not? (services poor, hard to organise, not needed)

Are you receiving any treatment at the moment? If so,

What?
Who organised this for you?
If on medication, what kind and will this continue when released? (If so, who will organise continuation?)
Are you taking the medication? If not, why not?

What do you think of the support you have received in preparing for release?

Is there anything that has been particularly good/helpful?

Is there anything that you feel should be improved?

Semi-structured Qualitative Interview Schedule: Post Release TAU Participant

How long have you been released from prison?

When you were released did you feel you needed help with anything?

- Health
- Substance misuse
- Housing
- Finances
- Employment
- Family

How have things been going for you since you were released?

- Health
- Substance misuse
- Housing
- Finances
- Employment
- Family

What responses to/support for these needs have you received?

Are you in contact with any services at the moment? If so,

- Which ones?
- Who organised this?
- In what way?
- At what time point?

If not, why not? (services poor, too hard to organise, not needed)

Are you receiving any treatment at the moment? If so,

What?

Who organised this for you?

If on medication, what and did this continue from prison? (If so, who organised continuation?)

If not, who made the appointment/started the meds?

Are you taking the medication? If not, why not?

What do you think of the support you have received since release?

Is there anything that has been particularly good/helpful?

Is there anything that you feel should be improved?

Have you been in contact with the police since release?

If so, for what reason?

How many times?

Have you been in hospital since release?

How did this come about?

How many times?

Appendix IV

1) CTI Fidelity Scale

CTI FIDELITY SCALE (for prison, England and Wales)

Not Implemented	Poorly Implemented	Fairly Implemented	Well Implemented	Ideally Implemented
1	**2**	**3**	**4**	**5**
≤40%	41%-55%	56%-70%	71%-85%	>85%

Components (compliance fidelity)		%	R
Phase 1 (Prison 4 weeks prior to release)	**CMP1 Engagement and early linking**		
1) visited client twice weekly 2) communicated (visits, calls and/or emails) with inreach staff at least weekly 3) visited housing provider/family caregiver at least twice 5) communicated (visits, calls and/or emails) with housing provider/family caregiver at least fortnightly 6) communicated (visits, calls and/or emails) with community mental health provider at least fortnightly **Base rating on CTI manager contact forms and progress notes.**			
Phase 2 (Release - 2 weeks post release)	**CMP2 Intensive outreach**		
1) visited client at least once a week (or other contact maintained) 2) visited and/or talked by phone with client at least 4 times 3) communicated (visits, calls and/or emails) with community mental health provider at least 4 times 4) visited housing provider/family caregiver at least once 5) visited and/or talked by phone with housing provider/family caregiver at least 3 times **Base rating on CTI manager contact forms and progress notes.**			
Phase 1 - 3	**CMP3 Three Phases**		
1) created a care plan for each phase 2) completed the care plans on time (± 2 days) **Base rating on CTI manager Phase 1-3 care plans. Missing plan are rated "0".**			
Phase 1 - 3	**CMP4 Focused**		
1) limited each care plan to 1 to 3 actions 2) selected actions only from the 6 CTI areas: psychiatric treatment & medication; money management; living skills training; family intervention; substance abuse treatment; housing crisis prevention & management **Base rating on CTI manager Phase 1-3 care plans.**			
Phase 3 (3-6 weeks post release)	**CMP5 Monitoring**		
1) communicated with client no more than once a week during Phase 3 2) communicated with community linkages no more than once a week during Phase 3 3) recorded specific ways support network was/was not working **Base rating on CTI manager Phase 3 contact forms and progress notes.**			
Closed cases	**CMP6 Time-Limited**		
1) did not provide CTI intervention after the 6 week date (±2 days) **Base rating on CTI manager contact forms and progress notes.**			
6 week post discharge	**CMP7 6-Week Follow-Up**		
1) CTI manager was in touch with client at the 6-week date (±2 days) 2) CTI manager provided at least 4 weeks active Phase 2-3 intervention (i.e., excluding gaps when client disappeared) **Base rating on CTI manager Phase 2-3 contact forms and progress notes.**			

Structure (context fidelity)		%	R
Any phase	**STR1 Caseload Size**		
Caseload size is 18 SCE cases or less per worker. Each worker's caseload at 3 time points is converted to SCE: Phase 1 case = 1.5 SCE; Phase 2 case = 2 SCE; Phase 3 case = .5 SCE. Assessor converts caseloads to Standard Caseload Equivalents (SCE) at 3 time points. *Apply to 'active' cases at each time point.* **Base rating on CTI Manager progress notes.**			

CTI Fidelity Scale (p2)

Not Implemented	Poorly Implemented	Fairly Implemented	Well Implemented	Ideally Implemented
1	**2**	**3**	**4**	**5**
≤40%	41%-55%	56%-70%	71%-85%	>85%

Quality (competence fidelity)		R
Phase 1	**QUA 1 Intake Assessment**	
1) demographic history (age, gender, ethnicity, marital status, children, family support/abuse), especially detailed Homelessness & reasons for housing loss and criminal history. 2) psychiatric, medical & substance abuse history (diagnosis, symptoms, meds, hospitalisations) 3) talents, training, Activity for Daily Living skills, what gives meaning to live **Base rating on CTI Manager contact forms and progress notes progress notes. All of the 3 criteria for a missing intake assessment are rated "0=not implemented".**		
Any phase	**QUA 2 Phase Planning**	
1) recorded today's date & phase start date 2) recorded rationale for each focus area in terms of client's needs 3) recorded general objectives for each area **Base rating on CTI Manager contact forms and progress notes.** **Missing plans are not rated – this was already done for CMP3.**		
Closed cases	**QUA 3 Closing Note**	
1) transfer-of-care meeting with client & all primary linkages or evidence of case closure (emails etc) 2) made prognosis for client's long-term continuity of care **Base rating on CTI Manager contact forms and progress. All criteria for a missing closing note receive a rating of "0=not implemented".**		
Phases 1 & 2	**QUA 4 CTI Managers Role with Client**	
1) was accessible to client when in field 2) encouraged contact between client & linkages, and between different linkages 3) mediated & negotiated between client & linkages, and between different linkages 4) took harm reduction approach to behavioral change **Base rating on meeting with clinical supervisor.**		
Not based on phase	**QUA 5 Clinical Supervision**	
1) corrected case management that was inconsistent with CTI principles & practices 2) provided guidance to assure approach was consistent with CTI principles & practices 3) scheduled case presentations for all new clients within a few weeks of enrollment into CTI **Base rating on meeting with clinical supervisor.**		
Not based on phase	**QUA 6 Organizational Support**	
1) minimum staff were hired (CTI-trained supervisor & workers) to maintain small caseloads & ensure fidelity 2) CTI program was advocated for both inside & outside parent agency 3) resources were provided to facilitate communication from the field 4) workers were enabled to carry out field work 5) response to CTI from outside agencies. **Base rating on meeting with CTI Manager.**		
	total of ratings:	
	FIDELITY SCORE (total divided by 14 fidelity items, rounded to nearest number)	

Appendix V

1) Secondary Outcomes - Non significant

		CTI	TAU	Total	*p* value
CPA Arranged		**n (%)**	**n (%)**	**n (%)**	
6 week	No	46 (85.2)	55 (93.2)	101 (89.4)	*p* = .225
(n = 113)[a]	Yes	8 (14.8)	4 (6.8)	12 (10.6)	
6 month	No	38 (84.4)	43 (86.0)	81 (85.3)	*p* = 1.000
(n = 95)[b]	Yes	7 (15.6)	7 (14.0)	14 (14.7)	
12 month	No	33 (84.6)	35 (87.5)	68 (86.1)	*p* = .755
(n = 79)[c]	Yes	6 (15.4)	5 (12.5)	11 (13.9)	
Compliant with Medication					
6 week	No	7 (15.9)	5 (13.2)	12 (14.6)	*p* = .765
(n = 82)[d]	Yes	37 (84.1)	33 (86.8)	70 (85.4)	
6 month	No	5 (13.9)	6 (16.7)	11 (15.3)	*p* = 1.000
(n = 72)[e]	Yes	31 (86.1)	30 (83.3)	61 (84.7)	
12 month	No	5 (15.2)	7 (25.9)	12 (20.0)	*p* = .345
(n = 60)[f]	Yes	28 (84.8)	20 (74.1)	48 (80.0)	
In Employment					
6 week	No	38 (95.0)	37 (97.4)	75 (96.2)	*p* = 1.000
(n = 78)[g]	Yes	2 (5.0)	1 (2.6)	3 (3.8)	
6 month	No	34 (94.4)	33 (94.3)	67 (94.4)	*p* = 1.000
(n = 71)[h]	Yes	2 (5.6)	2 (5.7)	4 (5.6)	
12 month	No	27 (90.0)	25 (96.2)	52 (92.9)	*p* = .615
(n = 56)[i]	Yes	3 (10.0)	1 (3.8)	4 (7.1)	
Contact with Family					
6 week	No	9 (20.9)	8 (22.2)	17 (21.5)	*p* = 1.000
(n = 79)[j]	Yes	34 (79.1)	28 (77.8)	62 (78.5)	
6 month	No	8 (22.9)	8 (22.2)	16 (22.5)	*p* = 1.000
(n = 71)[k]	Yes	27 (77.1)	28 (77.8)	55 (77.5)	
12 month	No	5 (17.9)	4 (16.7)	9 (17.3)	*p* = 1.000
(n = 52)[l]	Yes	23 (82.1)	20 (83.3)	43 (82.7)	

[a]3 cases was excluded due to missing data; [b]3 cases was excluded due to missing data; [c]5 cases were excluded due to missing data; [d]2 cases were excluded due to missing data; [e]10 cases were excluded due to missing data; [f]0 cases were excluded due to missing data; [g]28 cases were excluded due to missing data; [h]28 cases were excluded due to missing data; [i]28 cases were excluded due to missing data; [j]37 cases were excluded due to missing data; [k]28 cases were excluded due to missing data; [l]32 cases were excluded due to missing data

Any Nights Living on the Street					
6 week	No	39 (81.3)	34 (75.6)	73 (78.5)	*p* = .616
(n = 93)[m]	Yes	9 (18.8)	11 (24.4)	20 (21.5)	
6 month	No	39 (97.6)	34 (87.2)	73 (92.4)	*p* = .108
(n = 79)[n]	Yes	1 (2.5)	5 (12.8)	6 (7.6)	
12 month	No	31 (93.9)	24 (88.9)	55 (91.7)	*p* = .649
(n = 60)[o]	Yes	2 (6.1)	3 (11.1)	5 (8.3)	

[m]23 cases were excluded due to missing data; [n]19 cases were excluded due to missing data; [o]24 cases were excluded due to missing data